

Art's-Way Manufacturing Co., Inc.

SHREDDER
Models 180C And 240C

Operator's Manual And Illustrated Parts Catalog
570000

Issued 12-07

O P S & I P C M A N U A L



This symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED. The message that follows the symbol contains important information about your safety. Carefully read the message. Make sure you fully understand the causes of possible injury or death.

IF THIS MACHINE IS USED BY AN EMPLOYEE, IS LOANED, OR IS RENTED, MAKE SURE THAT THE OPERATOR UNDERSTANDS THE TWO INSTRUCTIONS BELOW.

BEFORE THE OPERATOR STARTS THE ENGINE:

1. GIVE INSTRUCTIONS TO THE OPERATOR ABOUT SAFE AND CORRECT USE OF THE MACHINE.
2. MAKE SURE THE OPERATOR READS AND UNDERSTANDS THE OPERATOR'S MANUAL FOR THIS MACHINE.

WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH.

BEFORE STARTING THE ENGINE, DO THE FOLLOWING:

1. READ THE OPERATOR'S MANUAL.
2. READ ALL SAFETY DECALS ON THE MACHINE.
3. CLEAR THE AREA OF OTHER PERSONS.

LEARN AND PRACTICE SAFE USE OF MACHINE CONTROLS IN A SAFE AND CLEAR AREA BEFORE YOU OPERATE THIS MACHINE ON A JOB SITE.

It is your responsibility to observe pertinent laws and regulations and to follow manufacturer's instructions on machine operation and maintenance.

See your Authorized Art's-Way Manufacturing Co., Inc. dealer or Art's-Way Manufacturing Co., Inc. for additional operator's manuals, illustrated parts catalogs, and service manuals.

TO THE OWNER

Congratulations on the purchase of your new Art's-Way Shredder. You have selected a top quality machine that is designed and built with pride to ensure you have many years of efficient and reliable service.

Many people have worked on the design, production, and delivery of this Shredder. The information in this manual is based on the knowledge, study, and experience through years of specializing in the manufacturing of farm machinery. This manual is designed to provide you with important information regarding safety, maintenance, and machine operation so you can and will get the best possible performance from your Shredder.

Even if you are an experienced operator of this or similar equipment, we ask that you **read this manual before operating the Shredder.** The way you operate, adjust, and maintain this unit will have much to do with its successful performance. Any further questions you may have about this product of Art's-Way equipment should be directed to your local Art's-Way dealer or to Art's-Way Manufacturing Co., Inc., Armstrong, Iowa, 50514, (712) 864-3131.

SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE WITHOUT NOTICE

Art's-Way Manufacturing Co., Inc. is continually making product improvements. In doing so, we reserve the right to make changes and/or add improvements to our products without obligation for the equipment previously sold.

Modifications to this Shredder may affect the performance, function, and safety of its operation. Therefore, no modifications are to be made without the written permission of Art's-Way Manufacturing Co., Inc. Any modification made without the written permission of Art's-Way Mfg. Co. shall void the warranty of this product.

In the interest of continued safe operation of this Shredder, pay particular attention to the safety alert symbol(s) throughout this manual.

ART'S-WAY MANUFACTURING CO., INC. STATEMENT OF PRODUCT LIABILITY

Art's-Way Manufacturing Co., Inc. recognizes its responsibility to provide customers with a safe and efficient product. Art's-Way Manufacturing Co., attempts to design and manufacture its products in accordance with all accepted engineering practices effective at the date of design. This statement should not be interpreted to mean that our products will protect against the user's own carelessness or failure to follow common safety practices nor will Art's-Way Manufacturing Co., be liable for any such act. In addition, Art's-Way Manufacturing Co. assumes no liability for any altered product or any modified product by users or anyone other than an authorized dealer.

IMPORTANT WARRANTY INFORMATION

The warranty for this Shredder appears on page 4 of this manual. In order to establish proper warranty registration, the Warranty Registration must be completed and returned to the factory. Failure to comply with this requirement may result in reduced warranty allowances.

LIMITATIONS OF THIS MANUAL

This manual contains operating instructions for your Shredder only. Any mention of other machinery in this manual other than the Shredder is for reference only. This manual does not replace nor is it to be used for any machinery that may be attached to or used in conjunction with the Shredder.

PARTS & SERVICE

As the purchaser of your new Shredder, it is very important to consider the following factors:

A. Original Quality

B. Availability of Service Parts

C. Availability of Adequate Service Facilities

Art's-Way Manufacturing Co., Inc. has an excellent dealership network ready to answer any questions you may have about your Shredder. Parts for your machine may be ordered through our dealers. When placing a parts order, please have the **model** and **serial number** ready. This will allow the dealer to fill your order as quickly as possible.

For your convenience, we have provided this space for you to record your model number, serial number, and the date of purchase, as well as your dealer's name and address.

Owner's Name: _____

Owner's Address: _____

Purchase Date: _____

Dealership Name: _____

Dealership Address: _____

Dealership Phone No.: _____

Shredder Serial Number

The placard containing the serial and model number is located on the Shredder. Enter the serial and model number of your Shredder within the space provided.



The placard is rectangular with rounded corners and four mounting holes. At the top is an oval logo with the text "Building on a" above "Art's-Way" and "Tradition of Quality" below. Below the logo are two input fields: "SERIAL NO." followed by a box, and "MODEL NO." followed by a box. At the bottom, it says "Manufactured By Art's-Way Manufacturing Co., Inc. Armstrong, IA".

Figure 1 - Serial Number Placard.

TABLE OF CONTENTS

TO THE OWNER	1	ILLUSTRATED PARTS CATALOG	20
SPECIFICATIONS AND DESIGN ARE SUBJECT TO		ALPHANUMERIC INDEX.....	20
CHANGE WITHOUT NOTICE	1	PTO ASSY – 1000 RPM WITH 1-3/8 TRACT	23
ART'S-WAY MANUFACTURING CO., INC.		PTO ASSY – 1000 RPM WITH 1-3/4 TRACT	25
STATEMENT OF PRODUCT LIABILITY.....	1	BASIC UNIT – 180C LESS ROTORS AND DRIVE.....	26
IMPORTANT WARRANTY INFORMATION.....	1	GEARBOX	30
LIMITATIONS OF THIS MANUAL	1	WINDROWING KIT – 180C (CUP ONLY)	31
PARTS & SERVICE.....	2	BASIC UNIT – 240C LESS ROTORS AND DRIVE	32
TABLE OF CONTENTS	3	ROTOR ASSY, CUPPED RH – HS 180	36
LIMITED WARRANTY	4	ROTOR ASSY, CUPPED LH – HS 180.....	37
SAFETY FIRST.....	5	SHREDDER – 180C AND 240C BASIC UNIT.....	38
NOTICES OF DANGER, WARNING, AND CAUTION	5	ROTOR ASSY, CUPPED RH – HS 240	39
SAFETY GUIDELINES.....	6	ROTOR ASSY, CUPPED LH – HS 240.....	40
BEFORE OPERATING	6	ROTOR ASSY – SD SLC, HS, 240.....	41
DURING OPERATION.....	6	HITCH ASSY.....	42
MAINTENANCE SAFETY	6	RATCHET JACK.....	43
HYDRAULIC SAFETY	7	DISK HITCH ASSY	44
TRANSPORTATION SAFETY	7	ROAD TRANSPORT.....	45
STORAGE SAFETY	7	SAFETY DECALS.....	46
TIRE SAFETY	7	WHEEL ASSY – 7.60 / 15 IMP	47
ASSEMBLY SAFETY.....	7	CARRIER ARM ASSY	48
SAFETY DECALS	9	SPECIFICATIONS	50
DECAL LOCATIONS & IDENTIFICATION.....	9	ART'S-WAY MANUFACTURING CO., INC.	
INTRODUCTION.....	12	TECHNICAL MANUALS.....	51
ASSEMBLING THE SHREDDER	13		
INSTALLING THE “A” HITCH AND DRIVE LINE	13		
ATTACHING WHEEL ASSEMBLY	13		
ROAD TRANSPORTATION.....	13		
PREPARING THE SHREDDER FOR			
OPERATION.....	15		
REVIEW THE MACHINE.....	15		
HITCHING TO THE TRACTOR	15		
TEST RUN SHREDDER	15		
FIELD OPERATION AND ADJUSTMENTS	16		
LEVELING AND HEIGHT ADJUSTMENT	16		
GEARBOX OIL LEVEL	16		
BELT TENSION	16		
FLAIL INSPECTION	16		
FROM TRANSPORT TO FIELD OPERATION	16		
FROM FIELD OPERATION TO TRANSPORT	17		
MAINTENANCE AND LUBRICATION	18		
SERVICE AND STORAGE.....	19		
SERVICE	19		
<i>Replacement Of Knives.....</i>	19		
<i>Replacement Of Rotor Shaft Bearings</i>	19		
STORAGE	19		

LIMITED WARRANTY

Art's-Way Manufacturing Co., Inc. warrants the products it sells to be free from defects in material and workmanship for a period of one (1) year after the date of delivery to the first (original) purchaser, subject to the following conditions:

- Art's-Way Manufacturing Co., Inc. obligation and liability under this warranty is to repair or replace (at the company's option) any parts that upon manufacture were defective in material or workmanship.
- All parts and repairs under this warranty shall be supplied at Art's-Way Manufacturing Co., Inc. or an authorized Art's-Way Manufacturing Co., Inc. dealer, at the option of Art's-Way Manufacturing Co., Inc.
- Art's-Way Manufacturing Co., Inc. warranty does not extend to parts and elements not manufactured by Art's-Way Manufacturing Co., Inc. and which carry the warranty of other manufacturers.
- Transportation or shipping to an authorized dealer for necessary repairs is at the expense of the purchaser.
- Art's-Way Manufacturing Co., Inc. makes no other warranty expressed or implied and makes no warranty of merchantability or fitness for any particular purpose beyond that expressly stated in this warranty. Art's-Way Manufacturing Co., Inc. liability is limited to the terms set forth in this warranty and does not include any liability for direct, indirect, incidental or consequential damages or expenses of delay and the Company's liability is limited to repair or replacement of defective parts as set forth herein.
- Any improper use and/or maintenance, including operation after discovery of defective or worn parts, operation beyond the rated capacity, substitution of parts not approved by Art's-Way Manufacturing Co., Inc., or any alteration or repair by other than an authorized Art's-Way Manufacturing Co., Inc. dealer which affects the product materially and adversely, shall void the warranty.
- No dealer, employee or representative is authorized to change this warranty in any way or grant any other warranty unless such change is made in writing and signed by an officer of Art's-Way Manufacturing Co., Inc.
- Some states do not allow limitations on how long an implied warranty lasts or exclusions of, or limitations on relief such as incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you the specific legal rights and you may have other rights that vary from state to state.

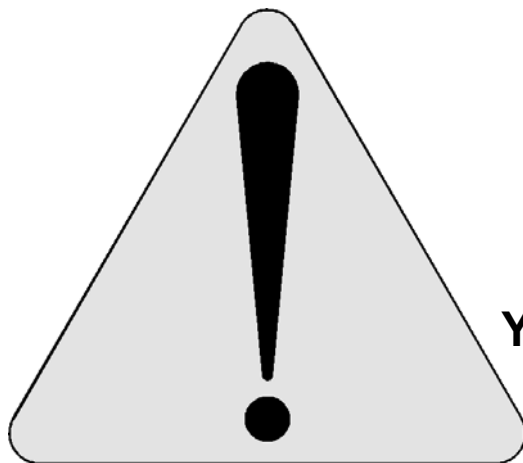
SAFETY FIRST

“A careful operator is the best insurance against an accident”

(National Safety Council)

Most accidents can be prevented if the operator:

- Fully understands how the machine functions
- Can anticipate situations which may produce problems
- Can make necessary corrections before problems develop



**THIS SYMBOL MEANS
ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!**

Figure 2 - Universal Safety Alert Symbol.

The American Society of Agricultural Engineers has adopted the Universal Safety Alert Symbol as a way to identify areas of potential danger if the equipment is not operated correctly. (See Figure 3.) Please be alert whenever you see this symbol in the manuals or on your Shredder.

Art's-Way Manufacturing Co., Inc. strives to make our equipment as safe as possible. The Art's-Way Shredder conforms to applicable safety standards at the time of manufacturing. A safety conscious equipment operator makes an effective accident-prevention program complete.

Safety features and instructions for the Shredder are detailed in the section of this Operator's Manual. It is the responsibility of the owner to ensure that all operators read and understand the manual before they are allowed to operate the Shredder. (Occupational Safety and Health Administration (OSHA) regulations 1928.57.)

NOTICES OF DANGER, WARNING, AND CAUTION

Signal Words: Note the use of signal words **DANGER**, **WARNING**, and **CAUTION** on the Shredder and in this manual. The appropriate signal word for each has been selected using the following guidelines:



DANGER: IMMEDIATE AND SPECIFIC HAZARD WHICH *WILL* RESULT IN SEVERE PERSONAL INJURY OR DEATH IF PROPER PRECAUTIONS ARE NOT TAKEN.



WARNING: SPECIFIC HAZARD OR UNSAFE PRACTICE *COULD* RESULT IN SEVERE PERSONAL INJURY OR DEATH IF PROPER PRECAUTIONS ARE NOT TAKEN.



CAUTION: A REMINDER OF GOOD SAFETY PRACTICES. PERSONAL INJURY *COULD* RESULT IF PROPER PROCEDURES ARE NOT FOLLOWED.



SAFETY GUIDELINES



Remember:

“The Best Operator is a Safe Operator”



CAUTION: READ AND UNDERSTAND THE OPERATOR'S MANUAL AND ALL THE SAFETY DECALS BEFORE OPERATING THE SHREDDER. REVIEW ALL SAFETY INSTRUCTIONS WITH ALL OPERATORS ANNUALLY.

BEFORE OPERATING

- Do not wear loose fitting clothing as it may catch in moving parts.
- Make sure to install and/or secure all guards, doors and shields, including the tractor power take-off (PTO) master shield, before starting or operating the Shredder.
- Be sure that the correct implement driveline parts are used and that they are properly secured.
- Install the safety chain when attaching the Shredder to the tractor.
- Clear the area of bystanders, especially children, when making repairs, adjustments or performing maintenance on the Shredder.
- Do not allow riders.
- Put all tractor and machine controls in “neutral” and disengage the PTO before starting. Follow the starting instructions according to your tractor manual.
- Operate the Shredder only while seated on the tractor seat.
- Make sure the unit is adequately supported with safety blocks or safety stands when changing tires or performing maintenance.



CAUTION: KEEP WELL CLEAR OF MOVING PARTS. BE SURE TO SHUT OFF THE TRACTOR AND SET THE PARKING BRAKE. REMOVE THE TRACTOR KEY WHILE MAKING ANY ADJUSTMENTS. WAIT FOR ALL MOVEMENT TO STOP BEFORE APPROACHING THE MACHINE.

DURING OPERATION

- Keep hands, feet, hair, and clothing away from moving parts.
- Keep all guards, doors and shields in place and in good working condition.
- Keep all bystanders, especially children, away from the Shredder while in operation.
- Do not allow riders while the Shredder is in operation.
- Do not attempt to unclog, clean, or adjust the Shredder while it is running.
- Stay away from overhead power lines. Electrocutation can occur even without direct contact.
- Keep all hydraulic lines, fittings, and couplers tight and free of leaks. (Refer to - Hydraulic Safety.)
- Use caution when ascending or descending on the Shredder. Wet shoes or boots are slippery.

MAINTENANCE SAFETY

- Follow all operating, maintenance and safety instructions found in this manual.
- Before servicing, adjusting, repairing or unclogging the machine, always make sure the tractor engine is stopped, the parking brake is set, and all the moving parts have stopped.
- Use sufficient tools, jacks, and hoists that have the capacity for the job.
- Use support blocks or safety stands when changing tires or performing maintenance.
- Follow good shop practices of keeping the service area clean and dry and use adequate light for the job at hand.
- Before applying pressure to the hydraulic system, make sure all lines, fittings and couplers are tightly secured and in good condition.
- Make sure all guards, doors and shields are in place and properly secured when performing maintenance.

HYDRAULIC SAFETY

- Make sure components in the hydraulic system are kept clean and in good working condition.
- Relieve pressure from the hydraulic system before servicing or disconnecting from the tractor.
- Keep all hydraulic lines, fittings, and couplers tightly secured and free of leaks.
- Replace any worn, cut, abraded, flattened or crimped hoses.
- Do not make any temporary repairs to the hydraulic lines, fittings or hoses using tape, clamps, or cement. The hydraulic system operates under extremely high pressure and temporary repairs may fail suddenly and create a hazardous and or dangerous situation.
- Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to identify and isolate a leak. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop if hydraulic fluid penetrates the surface of the skin.
- Before applying pressure to the system, make sure all components are tight and that the hydraulic lines, hoses, and couplings are not damaged.

TRANSPORTATION SAFETY

- Make sure the Shredder complies with all local regulations regarding the transportation of equipment on public roads and highways.
- Make sure the Slow Moving Vehicle (SMV) emblem and all lights and reflectors required by local highway and transportation authorities are properly in place, clean, and clearly visible to traffic.
- Do not allow riders on any machinery during transport.
- Make sure the Shredder is securely attached to the tractor and install a safety chain to the Shredder.
- Make sure the tractor brake pedals are latched together.
- Do not exceed 20 mph (32 km/h) when transporting the Shredder. Always reduce speed on rough roads and surfaces, or when going down inclines.

- Use caution when turning and always use the turn signals on the tractor to indicate your turning intentions to the other traffic.
- The weight of the trailed machine should NEVER exceed the weight of the towing vehicle.
- Check all clearances carefully whenever the machine is towed.

STORAGE SAFETY

- Store the Shredder in an area away from human activity.
- Do not permit children to play on or around the stored machine at any time.
- Make sure that the Shredder is stored in an area with a firm and level base to prevent the machine from tipping or sinking into the ground.
- Block the wheels to prevent the machine from rolling.

TIRE SAFETY

- Have only a qualified tire dealer or tire repair service perform tire repairs.
- Do not attempt to install a tire on a wheel or rim unless you have the proper equipment and experience to do the job.
- Follow proper procedures when installing a tire on a wheel or rim to prevent an explosion that could result in serious injury.
- Do not substitute tires with a lesser road rating and/or capacity of the original equipment tires.



CAUTION: FAILURE TO FOLLOW PROPER PROCEDURES WHEN INSTALLING A TIRE ON A WHEEL OR RIM CAN PRODUCE AN EXPLOSION THAT MAY RESULT IN SERIOUS INJURY OR DEATH. DO NOT ATTEMPT TO INSTALL A TIRE UNLESS YOU HAVE THE PROPER EQUIPMENT AND EXPERIENCE TO PERFORM THE JOB. REPLACEMENT, REPAIR, AND/OR MAINTENANCE SHOULD BE DONE BY A QUALIFIED TIRE DEALER OR QUALIFIED REPAIR SERVICE.

ASSEMBLY SAFETY

- Use adequate manpower to perform assembly procedures safely.
- Assemble the Shredder in an area with sufficient space to maneuver the largest components and allow easy access to all sides of the machine.

- Use only forklifts, lift cranes, jacks and tools with sufficient capacity for the loads.
- Do not allow spectators, especially children, in the working area.

Remember:

“The Best Operator is a Safe Operator”

SAFETY DECALS

DECAL LOCATIONS & IDENTIFICATION

The different types of safety decals for your Shredder are illustrated on the following pages (See Figure 3, Figure 4, and Figure 5). Please familiarize yourself with the appearance of each decal, the warning it describes, and the area where it is located on the Shredder.

Safety awareness is the responsibility of each operator of the Shredder. Keep safety decals and signs clean and legible and be sure replacement parts display the current safety decals and signs as well.

Remember: Always replace missing, damaged or illegible safety decals. New decals and signs are available from an authorized dealer.

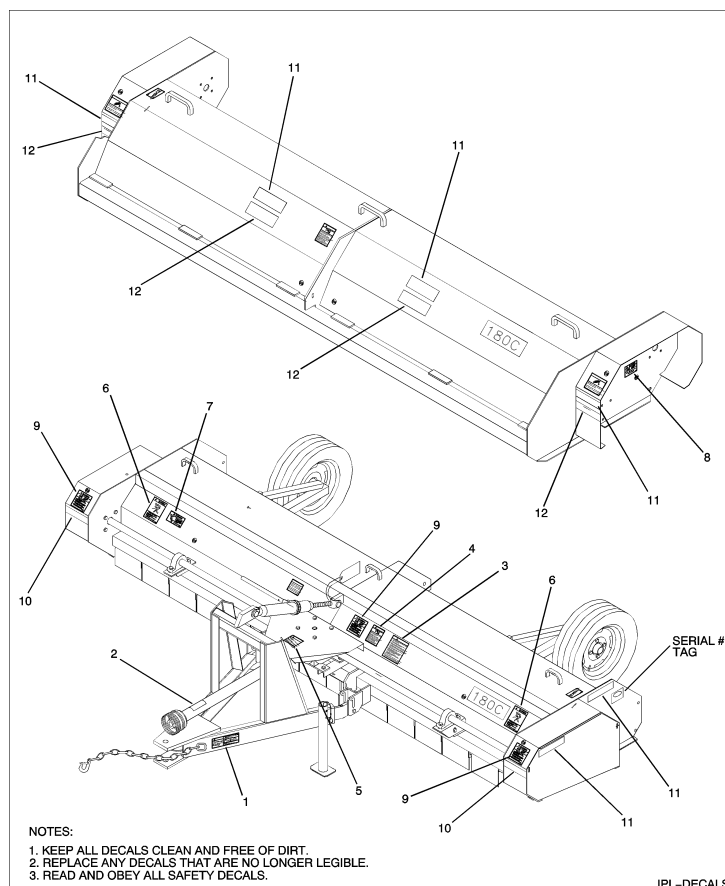
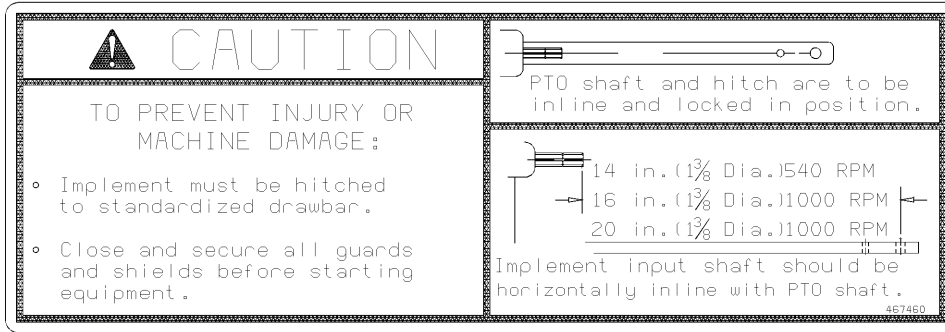


Figure 3 - Shredder Decals

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
1	383970	DECAL, HITCH INSTRUCTIONS	1
2	268860	DECAL, DANGER ROTATING DRIVE	1
3	368040	DECAL, CAUTION SAFETY INSTRUCTIONS	1
4	363000	DECAL, DANGER, COMP., ROTATE, DISENGAGE	2
5	384020	DECAL, DANGER 1050 RPM	1
6	467400	DECAL, WARNING FLYING OBJECT	2
7	467420	DECAL, WARNING RIDER FALL	1
8	467430	DECAL, DANGER SHIELD MISSING	2
9	467450	DECAL, WARNING MOVING PART	3
10	476460	TAPE, YELLOW REFLECTIVE	2
11	476450	TAPE, RED REFLECTIVE	2
12	476470	TAPE, RED-ORANGE REFLECTIVE	4

NOTE: Keep all decals clean and free of dirt for maximum visibility. Replace all individual decals that are no longer legible. Read and obey all safety decals and be familiar with their meaning.



"CAUTION" – IMPLEMENT MUST BE HITCHED TO STANDARDIZED DRAWBAR (P/N 383970)



"DANGER" ROTATING DRIVELINE
(P/N 268860)



"DANGER" – ROTATING CUTTING MECHANISM THAT RUNS AFTER POWER IS SHUT OFF (P/N 363000)



"DANGER" – 1000 RPM SPEED
(P/N 384020)

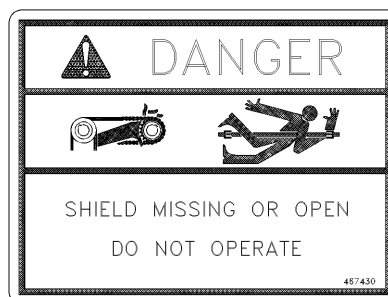
OPS-DECALS SHT 1

Figure 4 - Safety Decals.

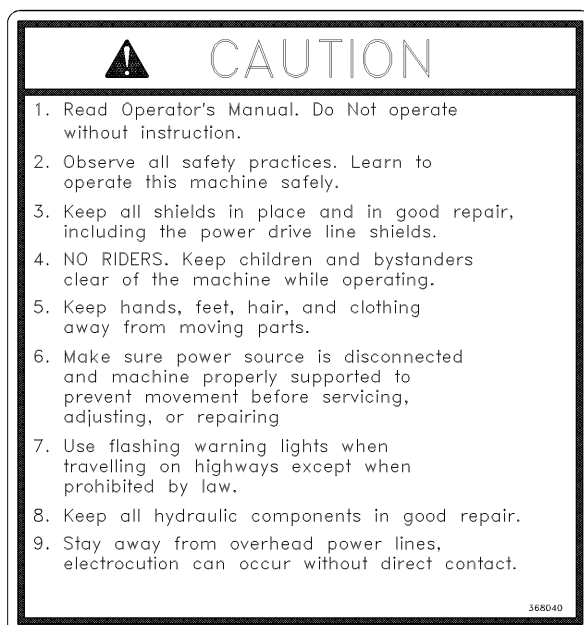
NOTE: Keep all decals clean and free of dirt for maximum visibility. Replace all individual decals that are no longer legible. Read and obey all safety decals and be familiar with their meaning.



"WARNING" MOVING PART HAZARD
(P/N 467450)



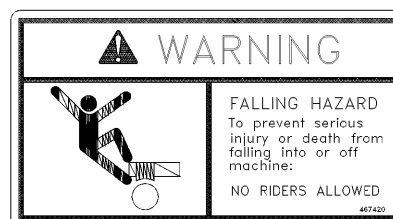
**"DANGER" SHIELD MISSING
OR OPEN DO NOT OPERATE.**
(P/N 467430)



**"CAUTION" GENERAL SAFETY
INSTRUCTIONS (P/N 368040)**



**"WARNING" THROWN OBJECT
HAZARD (P/N 467400)**



**"WARNING" FALLING HAZARD – NO
RIDERS ALLOWED (P/N 467420)**

OPS-DECALS SHT 2

Figure 5 - Safety Decals.

NOTE: Keep all decals clean and free of dirt for maximum visibility. Replace all individual decals that are no longer legible. Read and obey all safety decals and be familiar with their meaning.

INTRODUCTION

This manual has been prepared to make you familiar with the proper assembly, operation, adjustment, lubrication and service of your shredder. Take time to be careful and better understand the efficient operation and care of your machine.

Whenever the terms "*Left*" and "*Right*" are used, it should be understood to mean standing behind the machine and facing the direction of forward travel.

Each shredder model has been designed to efficiently chop stalks, stubble, or just trim an area. The cupped knife design creates a suction that lifts plant material into the cutting chamber to allow running maximum height from the ground.

The rotors of the shredder are balanced with knives in place to assure vibration free operation.

ASSEMBLING THE SHREDDER



CAUTION: IN THE SET-UP PROCEDURE, KEEP SAFETY IN MIND. USE ADEQUATE BLOCKING TO PREVENT PERSONAL INJURY. KEEP CHILDREN AWAY. INJURY CAN OCCUR FROM LIFTING TOO HEAVY OF AN ITEM OR FROM FALLING MEMBER IF IT IS NOT PROPERLY SUPPORTED OR BLOCKED.

INSTALLING THE “A” HITCH AND DRIVE LINE

1. Carefully tilt the shredder to operating position and remove wood blocks. Do not allow flails to contact the ground, this could damage the flails or rotor.
2. Raise and secure the shredder on wood blocks or other stand so that the flails are clear of the ground. This will protect the balanced shaft.
3. Slide the “A” hitch into the front mounting brackets located on each side of the gear box (see pg 39). Fasten in place with the two (2) 1/8 X 3 inch hex bolts and the two (2) 1/8 inch hex lock nuts provided.
4. Install the screw jack or hydraulic cylinder from top of hitch to tab on the shredder housing. Cylinder or screw jack must be purchased separately.
5. Fill the gearbox to the top of the shafts with SAE 90 gear lubricant.
6. Before installing the PTO, lubricate and inspect the telescoping members and shields. Install the PTO on the input shaft of the gearbox. Make sure it is securely locked to the shaft of the gearbox.
7. Lubricate between the rotating PTO parts and plastic shield through the plastic grease fitting on the shield.
8. Secure the PTO shield from rotating with chain provided.

ATTACHING WHEEL ASSEMBLY

1. Calculate the approximate position of the axle brackets according to the row spacing desired. The outer wheels should run between the outer two rows being cut. The axle brackets are symmetrical and can be rotated 180 degrees. The bracket should be mounted to the inside of the tire. The bracket

(on pg 48) is left mounted. On the shredder models 180C and 240C, install in reversed position on the next row in for model 180C or two rows in on model 240C.

2. Install the axle attaching brackets to the rear 4X4 tube in the determined position with 5/8 U-bolts, nuts, and washers per page 48.
3. Mount tire and wheel to the hub. Tire pressure for 7.60-15 6 ply tire is 40 psi. Recheck the spacing and tighten all bolts.

ROAD TRANSPORTATION

Optional – Refer to Page 45.

1. Bolt the hitch weldment (item 17) to the shredder with 3/4 X 2 inch bolts, flat washers, and lock nuts (Items 8, 10, and 13). One side of the hitch weldment bolts to the transport end plate and the other side bolts to the transport side plate. The flat washers act as spacers between the hitch weldment sidebars and the transport end plate and side plate.
2. Attach the end of the brace angle that has one bolt hole to the hitch weldment with a 3/4 X 2 inch bolt, flat washer, and lock nut (Items 8, 10, and 13). The flat washer acts as a spacer and is placed between the brace angle and the transport hitch weldment. There are four (4) holes in the opposite end of the brace side plate with a 3/4 X 2 inch bolt, lock washer, and nut (Item 6, 7, and 10). This will position the hitch assembly in the transport position.
3. Position and pin the transport jack assembly (item 18) to the hitch weldment (Item 17). A piece of tubing with four (4) holes equally spaced on the circumference is welded to the hitch so the jack may be pinned in either a vertical or horizontal position. Position the jack mounting tube over the mating tube on the hitch and pin the jack in the vertical position.
4. Bolt the axle weldments (item 16) to the axle mounting plates previously welded on each side of the machine using four (4) 5/8 X 2-1/4 inch bolts, lock washers, and nuts (Items 1, 3, and 4) per axle weldment.

5. The hub and spindle assembly (Item 19) is shown as an exploded view in the IPL for clarity but is actually pre-assembled at the factory. Bolt the spindle assembly to the channel weldments using the 1/2 X 4-1/2 inch bolts, and 1/2 inch lock nuts (Items 2 and 5).
6. Place the channel weldment (Item 15) between the plates of the axle weldment assembly, bolt the two together by passing a 3/4 inch X 5-1/2 inch bolt through the upper most hole in each piece and fasten with a 3/4 inch lock washer and nut (Item 6, 7, and 9). This bolt acts as the pivot when raising or lowering the transport wheel. Secure the channel weldment in the transport position by placing a second 3/4 X 5-1/2 inch bolt through the lower hole in the axle weldment and the corresponding hole in the channel weldment. Fasten with a 3/4 inch lock washer and nut. Follow this procedure for each side of the machine.
7. Hook a tractor to the shredder as it would be when in field operation. Either remove the cylinder stops or move stops as close as possible to the clevis so maximum cylinder stroke may be obtained. Leave the PTO disconnected.
8. With the jack stands lowered and pinned retract the hydraulic cylinder so the carrier wheels are as far off the ground as possible.
9. Place a 6 inch block under the two carrier wheels closest to the center of the shredder. Extend the cylinder raising the front of the shredder.
10. Pin jack stands in the lowered position.
11. Retract cylinder fully, causing the shredder to pivot on the jack stand. This will lift the rear of the machine.
12. Place wheel with tire on rear hub and spindle assembly and secure with lug nuts.
13. Extend the cylinder completely; pivot the shredder on the rear transport tire, raising the front of the shredder.
14. Bolt the wheel with tire on front hub assembly and secure with lug nuts.
15. Raise and pin jack stands in the upper position.
16. Retract cylinder until the shredder is resting on the transport wheels and transport hitch jack.
17. Refer to operation for instructions on transport and field operation procedures.

PREPARING THE SHREDDER FOR OPERATION

REVIEW THE MACHINE

- Generally inspect the machine for:
- Any loose bolts and/or set screws
- Proper tensioning of drive belts
- Proper PTO installation
- Hydraulic cylinders and hoses being properly installed
- Oil level in gearbox
- All shields and guards being in place
- Proper installation of any options

HITCHING TO THE TRACTOR



CAUTION: NEVER PUT YOUR HANDS INSIDE OF THE MACHINE DURING OPERATION. KEEP CHILDREN AND BYSTANDERS AWAY FROM THE MACHINE IN OPERATION. SHUT OFF TRACTOR ENGINE AND PLACE IGNITION KEY IN POCKET BEFORE ADJUSTING, LUBRICATING, OR REPAIRING MACHINE.

Adjust front and rear wheels of the tractor to fit desired row spacing.

Adjust the tractor drawbar (Figure 6) for 1000 RPM operation of the PTO.

Attach the shredder to the tractor with suitable hitch pin.

Attach safety chain as shown in Figure 3.

Connect the PTO driveline to the proper tractor PTO shaft. Secure rotating shield of PTO with chain provided.

Raise the shredder to retract the jack stands.

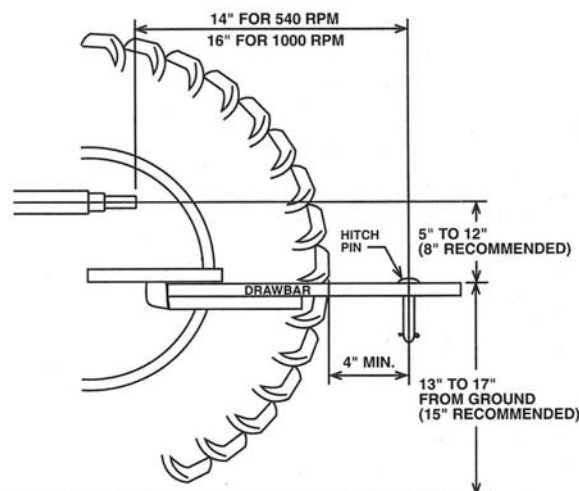


Figure 6 - PTO/Tractor Hitching Dimensions

TEST RUN SHREDDER

Check flails to make sure they are free swinging and all in place.

Run the tractor at low RPM and slowly engage the PTO. Check operation of the machine at low RPM.

Slowly increase the RPM's to proper operating speed of 1000 RPM. Check operation, alignment, and clearances of all moving parts. Make any necessary adjustments.

Run the machine for 10 to 15 minutes. After running is complete recheck machine for any loose hardware and recheck drives.

It is important that the shredder be operated and adjusted correctly. The following explains how to get the best service out of the machine.

FIELD OPERATION AND ADJUSTMENTS



CAUTION: NEVER MAKE ANY ADJUSTMENTS OR REPLACE ANY PART WITHOUT FIRST OBSERVING ALL SAFETY PROCEDURES OUTLINED IN THIS MANUAL AND WAITING UNTIL ALL MOVING PARTS HAVE STOPPED.



CAUTION: FLAILS ROTATE AT HIGH SPEED WHILE SHREDDING. BYSTANDARDS MUST STAY CLEAR OF THE MACHINE TO PREVENT INJURY FROM THROWN OBJECTS.



Figure 7 - Belt Tension

LEVELING AND HEIGHT ADJUSTMENT

The end of the blade tips (i.e. cup knives) should be 4 to 6 inches from the top of the ground. The side slice knives should be 1 to 2 inches lower than the cup knives.

Lower the front of the machine to the desired height, run the machine as high as possible. Use the cylinder stop to maintain height. Use of screw jacks instead of a hydraulic cylinder helps prevent lowering knives into the ground.

Damage to knives and excessive wear will occur with knives too close to the ground.

Shredder bars (Item 10) are adjustable. For a finer cut, move the shredder bars towards the knives. For a coarser cut, move the shredder bar away from the knives. If a coarse cut is acceptable, the bars may be removed.

GEARBOX OIL LEVEL

Check to insure that the gearbox has sufficient oil. Do not over fill the gearbox. Correct gearbox lubricant level is verified by removing the top vent then using a clean dip stick or visually verify that the oil is even (level) with the top of the main cross shaft. Use EP90 gear lubricant or equal as required.

BELT TENSION

It is important to maintain belt tension. Be sure to check daily. Extend springs as shown (Figure 7) a nickel will just pass between each coil.

FLAIL INSPECTION

Check flails regularly, especially if rocks are struck. Any bent or broken knives should be replaced immediately. Remember always replace two knives (the one that needed replacing and the one directly opposite) to maintain balance.

If vibration is present, check bearings and flails and correct problem. Continual running with vibration will result in damage to the machine.

FROM TRANSPORT TO FIELD OPERATION

NOTE: The road transport is an optional feature.

1. Lower hitch jack and unhook tractor from the transport hitch.
2. Connect tractor to field hitch and attach hydraulic cylinder.
3. Extend cylinder until front transport wheel raises from the ground
4. Raise front transport wheel and bolt in the up position by removing the lower 3/4 X 5-1/2 inch bolt joining the axle weldment assembly (Item 16) and channel weldment (Item 15). Pivot channel weldment and tire about the upper 3/4 inch bolt until the holes in the channel weldment align with the upper holes in the axle weldment and bolt in place using the 3/4 x 5-1/2 inch bolt, lock washer, and nut.
5. Lower and pin the jack stands.
6. Retract the cylinder until the rear transport wheels are lifted from the ground.

7. Raise the left rear transport wheel and bolt in the up position by removing the lower 3/4 X 5-1/2 inch bolt joining the axle weldment assembly (Item 16) and channel weldment (Item 15). Pivot channel weldment and tire about the upper 3/4 inch bolt until the holes in the channel weldment align with the upper holes in the axle weldment and bolt in place using the 3/4 x 5-1/2 inch bolt, lock washer, and nut.
8. Rotate the transport hitch jack to the horizontal transport position.
9. Remove the bolt that joins the brace angle (Item 14) to the side plate, lift hitch, and bolt to tab.
10. Extend the cylinder until pressure from the jack stands is removed. Raise the jack stands and pin in the raised position.
7. Lower the front transport wheel into position and secure by first removing the lower 3/4 X 5-1/2 inch bolt that passes through the axle weldment assembly (Item 16). Pivot the transport wheel about the upper 3/4 inch bolt until the holes in the channel weldment align with the lower holes in the axle weldment assembly. Replace the 3/4 X 5-1/2 inch bolt and fasten with lock washer and nut.
8. Raise and pin the jack stands.
9. Lower the shredder so that it rest on the transport wheels and transport hitch jack.
10. Disconnect the tractor from the field hitch and hydraulic cylinder.
11. Hook the tractor to the transport hitch and place the hitch jack in the horizontal position.
12. Fasten the safety chain to the tractor.
13. Remove and secure the hydraulic cylinder and PTO.

FROM FIELD OPERATION TO TRANSPORT

1. Extend the lift cylinder that will raise the front of the shredder.
2. Lower and pin the jack stands.
3. Retract cylinder which will raise the back of the shredder allowing the rear carrier wheel to be lowered into position.
4. Lower the rear carrier wheel into position and secure by first removing the lower 3/4 X 5-1/2 inch bolt that passes through the axle weldment assembly (Item 16). Pivot the transport wheel about the upper 3/4 inch bolt until the holes in the channel weldment align with the lower holes in the axle weldment assembly. Replace the 3/4 X 5-1/2 inch bolt and fasten with lock washer and nut.
5. Position transport hitch. Remove the bolt fastening brace angle (Item 14) to the tab then refasten brace angle to top hole in the side plate. Rotate transport hitch to the horizontal position and extend until the jack has pressure on the ground.
6. Extend the lift cylinder. The shredder will pivot on the rear transport wheel and transport hitch jack.

MAINTENANCE AND LUBRICATION

1. Grease bearings with one or two pumps of grease from a hand grease gun every ten (10) hours of operation. This is especially important on four rotor bearings. See Figure 8.
2. Check the gearbox lubrication level seasonally. Correct gearbox lubricant level is verified by removing the top vent plug then using a clean dip stick or visually verify that the oil is even (level) with the top of the main cross shaft. Use EP90 gear lubricant or equal as required.
3. Check spring tension on drive belts.
4. Check for loose or damaged fasteners.
5. Check for excessive wear, bent, or broken knives. Always replace two knives (the one that needed replacement and the one directly opposite) to maintain balance.
6. Do not operate the machine if excessive vibration is present.

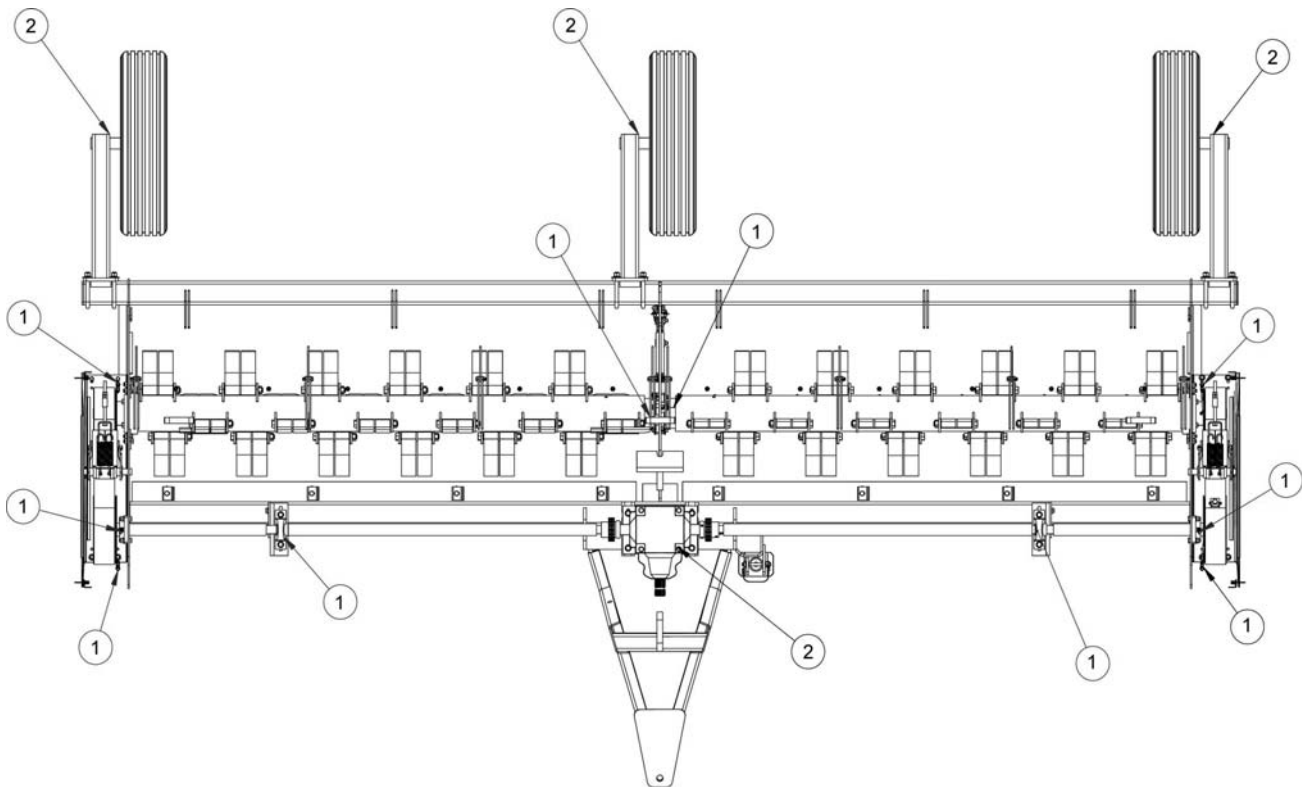


Figure 8 - LUBRICATION POINTS

SERVICE AND STORAGE

SERVICE

Replacement Of Knives

1. Disconnect the PTO from the tractor.
2. Make sure the machine is adequately blocked.
3. When replacing a damaged knife, replace the damaged knife plus the knife directly opposite. Be sure to inspect other parts and replace if necessary. Torque bolts to 150 ft-lbs.

Important: An unbalanced rotor will cause the machine to vibrate excessively and damage both the bearings and the shafts.

Replacement Of Rotor Shaft Bearings

Do not attempt to replace bearings from underneath the shredder.

1. Remove the axle arms and “A” hitch.
2. Loosen the spring loaded idler and remove belts.
3. Turn the shredder on its back.
4. Remove the drive sheave from the rotor shaft. Clean and smooth the rotor shaft. Remove remote lubrication line.
5. Loosen the bearing lock collar and remove the bearing mounting bolts on the drive end. Remove the bearing from the shaft, taking care not to damage the shaft.
6. The shaft seal should extend approximately 1/16 of an inch past the end plate on the bearing side when reinstalled. Place lube plate between the end plate and the bearing.
7. If the center bearing must be replaced, remove the remote lubrication lines, loosen the bearing collar, and remove bolts. Lift the rotor up until the bearing can be removed and replaced.
8. When reassembling, be sure to note the lube fitting locations and make sure the center shaft clears the center housing place. Torque the bearing bolts. 9/16 inch diameter GR5 plated bolts should be torqued to 82 ft-lbs. 5/8 inch diameter GR5 plated bolts should be torqued to 112 ft-lbs.

9. Reattach the remote lubrication lines, turn the shredder over, and reassembly. Lubricate new bearings with three (3) pumps of grease.



CAUTION: NEVER PUT YOUR HANDS INSIDE OF THE MACHINE DURING OPERATION, OR PERFORM ANY KIND OF AN ADJUSTMENT, LUBRICATION, OR REPAIR TO THE MACHINE WITHOUT SHUTTING OFF THE TRACTOR IGNITION AND PLACING KEY IN POCKET. KEEP CHILDREN AND BYSTANDARDS AWAY FROM THE MACHINE IN OPERATION.

Remove all wrenches, tools, parts, or other foreign objects from the machine when work is complete.

STORAGE

To obtain a long life and trouble free service from this machine, it should be properly prepared and stored.

1. Flush the entire unit with water to remove all accumulations of dirt, grease, or foreign material.
2. Check for cracked, worn, or damaged belts, bearings, blades, and other parts. Early detection and replacement of failing parts will save downtime next season.
3. Repaint any area where the paint has been worn or chipped off.
4. Replace all safety decals that are no longer legible.
5. Remove and grease driveline and store in a dry place.
6. Repack wheel bearings.
7. Set the machine on blocks and store inside.

ILLUSTRATED PARTS CATALOG

- The figure item corresponds to the number shown in the illustration. Figure items having a dash “-“ next to the number indicates that the figure item is not displayed on the corresponding illustration.
- Numbers listed in the part number column are the numbers under which the parts are manufactured and by which the parts are identified by the manufacturer.
- Requirement shown in the Units Per Assy column is per shredder or assembly. Items that have no specified quantity are designated by the letters “AR” (as required). “RF” listed in the Units Per Assy column indicates that the item is listed as a reference and the requirement is listed in another figure of the IPC.

The relationship of component parts of an installation or assembly may be determined by the degree of indenture in the nomenclature column. The next higher assembly can be found by referring to the first indentation above and to the left. The following example shows the format of this indented system:

1	2	3	4
*	*	*	*
DETAIL PART OR ASSEMBLY			
*	DETAIL PART BREAKDOWN OF ASSEMBLY BREAKDOWN		
*	*	ADDITIONAL BREAKDOWN OF DETAIL PART OR ASSEMBLY	
*	*	*	ADDITIONAL BREAKDOWN OF DETAIL PART OR ASSEMBLY

ALPHANUMERIC INDEX

0	196770.....23, 25
012630.....45, 48	2
016520.....45	210270.....28, 34
016530.....45	210330.....28, 34
016531.....45	210680.....34
018710.....45	210690.....28, 34
020730.....45	220860.....34
020740.....45	235770.....30
035420.....45, 48	243530.....28
044370.....48	243580.....38
1	243650.....28, 34
119641.....28, 34	244230.....28, 34
129770.....30	244240.....28, 34
156510.....34	244250.....28, 33
163770.....28, 34	244260.....28, 33
164420.....47	244280.....28, 33
167330.....29, 33	248970.....45
1765302.....42	249170.....45
182230.....23, 25	249230.....45
182890.....23, 25	249270.....45
196730.....23, 25	249290.....45
196750.....23	250170.....45
	250330.....28

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250480	33
250630	34
250960	45
251300	45
253861	28
254140	42
254340	34
254350	28, 34
254390	28
268860	23, 25, 46
273730	47
273740	47
273750	47, 48

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340210	23
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354180	23
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368040	46
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5

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570030A	28

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574900	29
574910	34
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574990	23
575320	30
575330	30

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E150004	42

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I493166R1	33

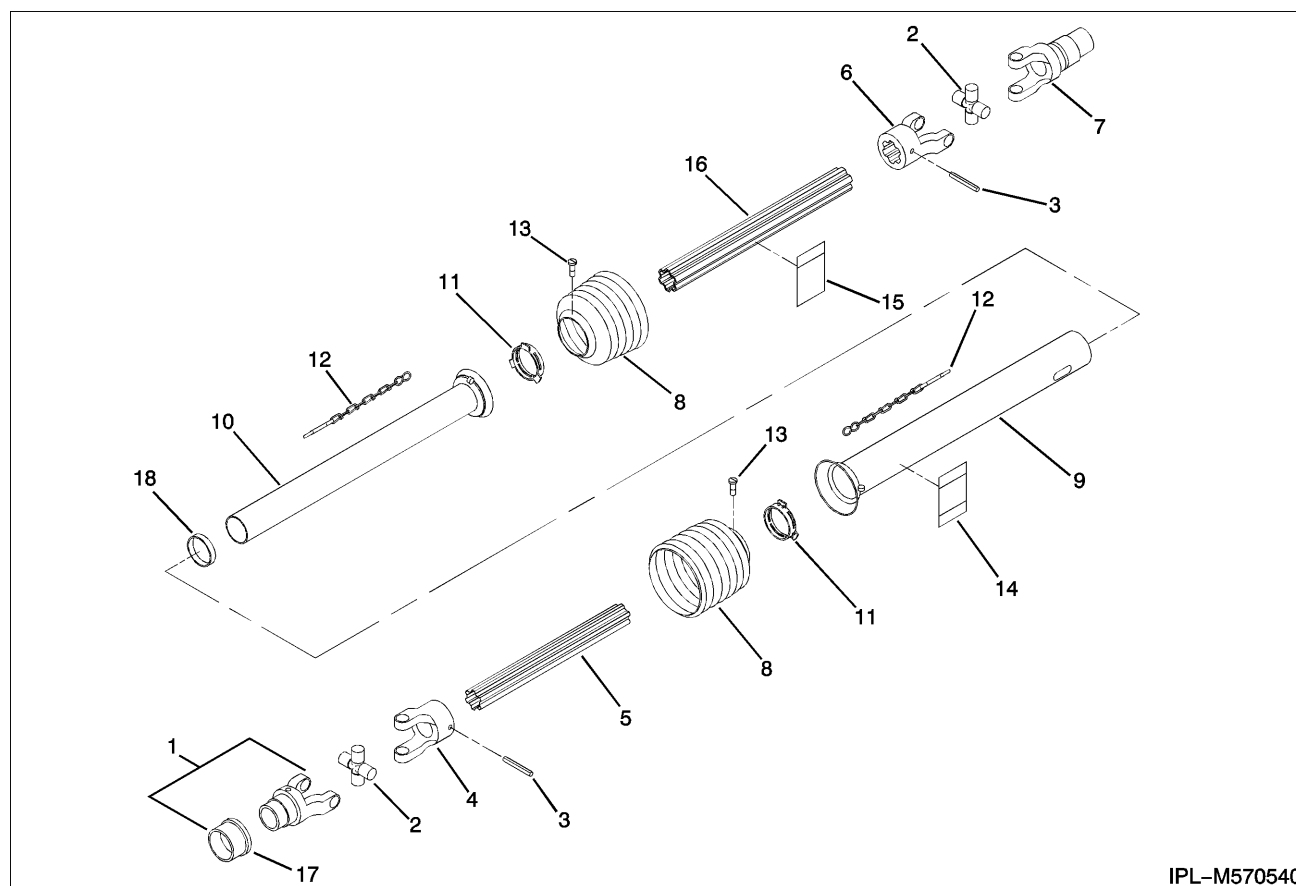
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R42650	44
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R45450	39, 40
R48340	40

R48350	39
R60608	28
R60636	45
R61055	28
R62891	28, 33
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R65108	38

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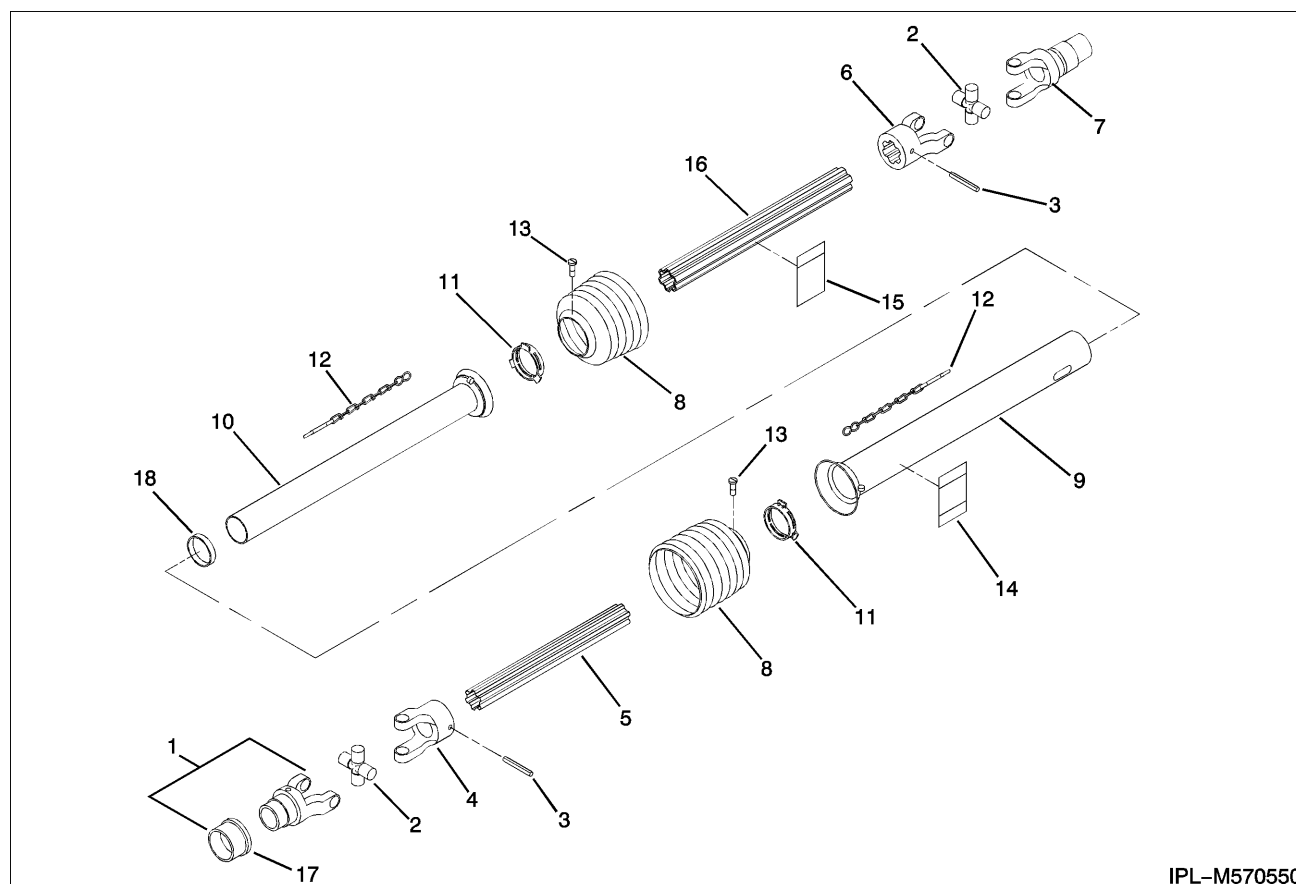
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PTO ASSY – 1000 RPM WITH 1-3/8 TRACT

IPL-M570540

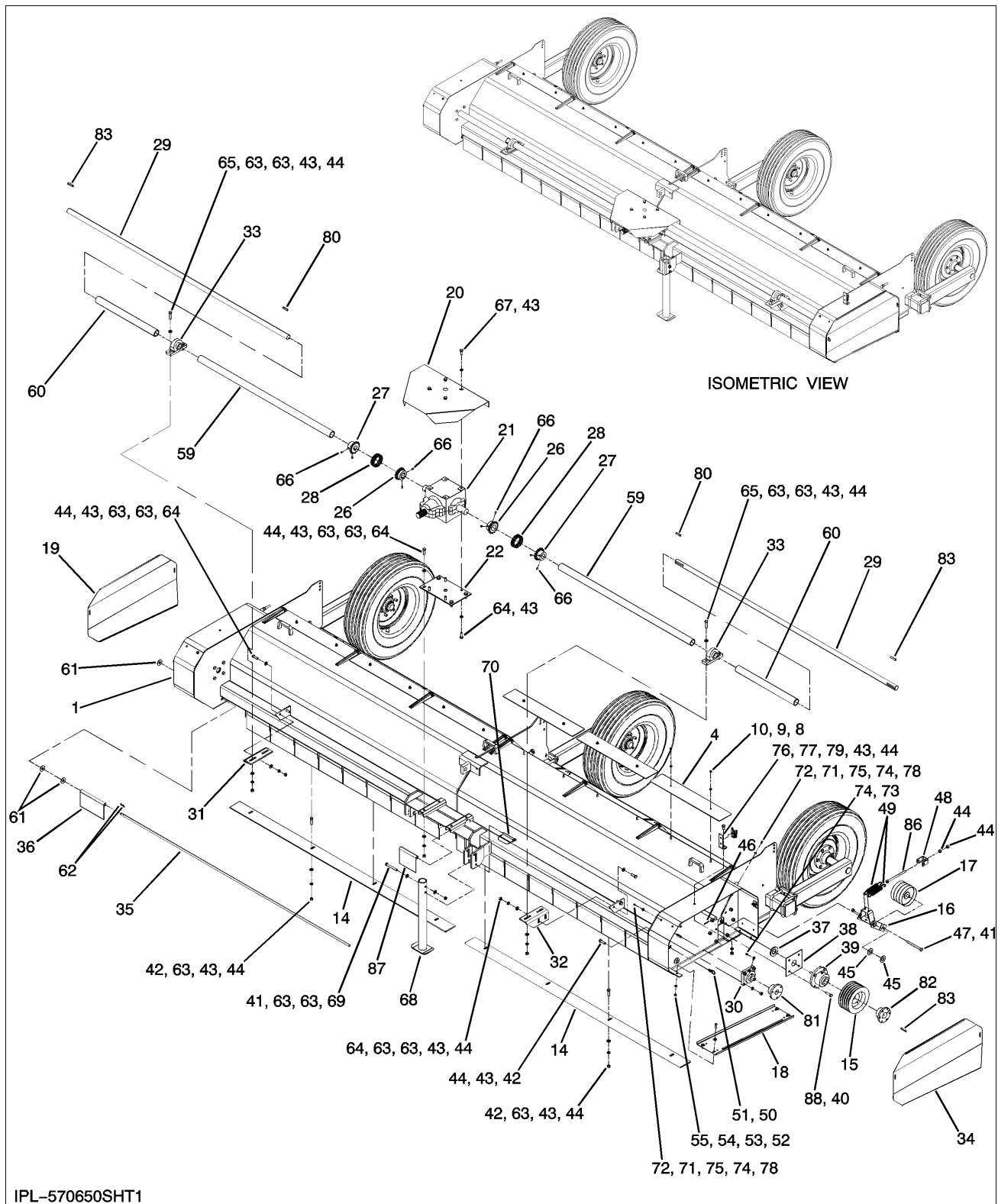
FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570540	PTO ASSY – 1000 RPM WITH 1-3/8 TRACT	RF
1	354180	YOKE, 1-3/8-6B SPL AS	1
2	182230	KIT, CROSS AND BEARING	2
3	196740	PIN, SPRING 10 X 90	2
4	196730	YOKE, INBOARD	1
5	196750	SHAFT, INNER PROFILE	1
6	196770	YOKE, INBOARD	1
7	574970	YOKE WITH OVERRUNNING CLUTCH	1
8	340140	SHIELD, CONE 7 RIB	2
9	574980	TUBE, OUTER SHIELD	1
10	574990	TUBE, INNER SHIELD	1
11	182900	RING, SC 24 BEARING	2
12	182890	CHAIN, SAFETY	2
13	345980	SCREW, SHIELD (IN ITEM 9)	2
14	268860	DECAL, DANGER ROTATING DRIVE LINE	1
15	340180	DECAL, DANGER SHIELD MISSING	1
16	196890	ZERK, 3/16 DRIVE GREASE (IN ITEM 6)	1
17	340210	KIT, SLIDE COLLAR 1-3/8-6B	1
18	340190	SUPPORT BEARING	1

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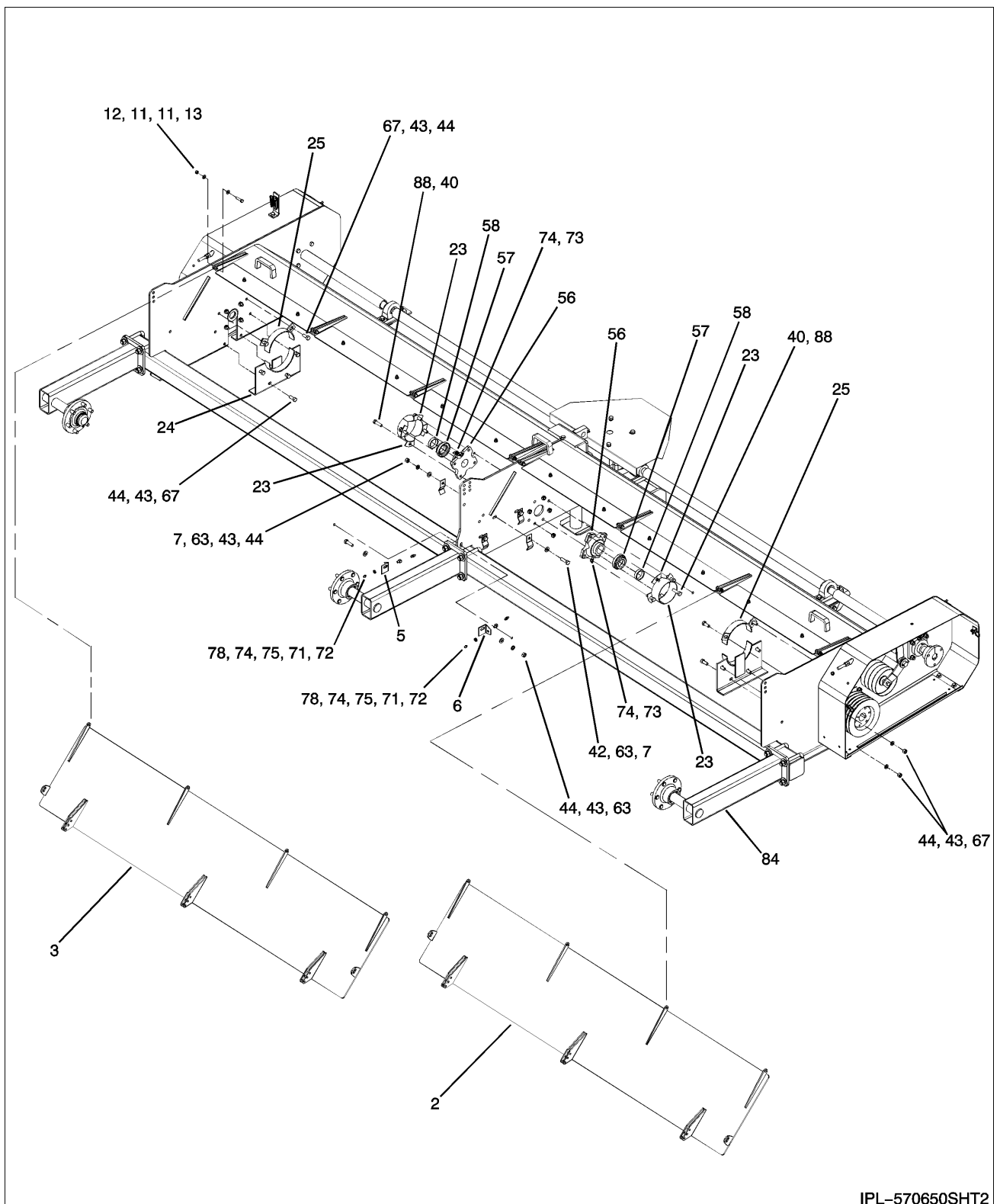
PTO ASSY – 1000 RPM WITH 1-3/4 TRACT

IPL-M570550

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570550	PTO ASSY – 1000 RPM WITH 1-3/4 TRACT	RF
1	354100	YOKE, 1-3/4-20 SPL AS	1
2	182230	KIT, CROSS AND BEARING	2
3	196740	PIN, SPRING 10 X 90	2
4	196730	YOKE, INBOARD	1
5	340110	SHAFT, INNER PROFILE	1
6	196770	YOKE, INBOARD	1
7	574970	YOKE WITH OVERRUNNING CLUTCH	1
8	340140	SHIELD, CONE 7 RIB	2
9	340150	TUBE, OUTER SHIELD	1
10	340160	TUBE, INNER SHIELD	1
11	182900	RING, SC 25 BEARING	2
12	182890	CHAIN, SAFETY	2
13	345980	SCREW, SHIELD (IN ITEM 9)	2
14	268860	DECAL, DANGER ROTATING DRIVE LINE	1
15	340180	DECAL, DANGER SHIELD MISSING	1
16	196890	ZERK, 3/16 DRIVE GREASE (IN ITEM 6)	1
17	340200	KIT, SLIDE COLLAR 1-3/4-20 B	1
18	340190	SUPPORT BEARING	1

BASIC UNIT – 180C LESS ROTORS AND DRIVE

BASIC UNIT – 180C LESS ROTORS AND DRIVE



IPL-570650SHT2

BASIC UNIT – 180C LESS ROTORS AND DRIVE

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570650	BASIC UNIT – 180C LESS ROTORS AND DRIVE	RF
1	570010	FRAME WLDT., MAIN	1
2	570020	HOOD WLDT.	1
3	570030	HOOD WLDT.	1
4	570230	PLATE, GAP COVER	6
5	244240	CLIP, CENTER LUBE RH	1
6	244230	CLIP, CENTER LUBE LH	1
7	254330	CLIP, GREASE LINE	6
8	254060	RHSS BOLT 0.3125-18 X 1.0 X 1.0-N	12
9	022920	FW 0.3125	12
10	020190	NYLON INSERT LOCKNUT, 5/16-18 UNC	12
11	570740	WASHER, FLAT 3/8 INCH NARROW ZN	16
12	011370	HEX BOLT 0.3750-16 X 1.5 X 1.5-N	8
13	023060	NUT, LOCK 3/8-16 2-WAY	8
14	R61055	BAR, CUTTING	2
15	R64761	5B 5B835SF X 5 GROOVE	2
16	210330	IDLER WLDT.	2
17	210270	PULLEY ASSY, IDLER	2
18	570350	BOTTOM CHANNEL	2
19	570320	SHIELD, RIGHT	1
20	367110	SHIELD	1
21	387330	GEARBOX, 1:1 600	1
22	574070	PLATE, MOUNTING	1
23	254390	GUARD, 144-180 CTR.	4
24	250330	SPLICE PLATE WLDT.	2
25	250370	ROTOR GUARD WLDT.	2
26	367100	SPROCKET	2
27	210690	SPROCKET, TYPE B	2
28	163770	CHAIN, ROLLER, 60-2	2
29	243530	JACKSHAFT	2
30	R40290	BEARING, FLG 1-3/8	2
31	R60608	MOUNTING, BRG. RH	1
32	R62891	MOUNTING, BRG. LH	1
33	R40741	1-3/8 PILLOW BLOCK	2
34	570330	SHIELD, LEFT	1
35	R42360	ROD, SKIRT 92 INCHES	2
36	243650	SKIRT, SAFETY	18
37	251120	SEAL, V-RING	2
38	250560	PLATE, SEAL	2
39	250640	BEARING, 1-3/4 SPHERICAL	2
40	252840	BOLT, HHCS 1/2-20 X 1-3/4 GR5 ZN	16
41	127890	HEX LOCK NUT 0.5000-13-D-N	3
42	1770500	BOLT, 1/2-13 X 1-3/4 GR5 ZN	20
43	005370	WASHER, LOCK 1/2 ZN	53
44	005360	NUT, HEX 1/2-13	49
45	1107389	WASHER, FLAT 1-1/16 X 2.0 X 1/8	4
46	124340	COTTER PIN, 3/16 X 2-1/2	2
47	162930	BOLT, HHCS 1/2-13 X 5-1/2 GR2 FULL THREAD	2
48	224400	CLIP, TAKE-UP	2
49	220860	SPRING, EXTENSION	4
50	I120393	WASHER, FLAT 5/16	4
51	156510	LATCH, MAIN	4
52	012260	HEX BOLT 0.3750-16 X 1.0 X 1.0-N	8
53	021190	WASHER, FLAT 3/8 STD. 7/16 X 1.0 X 5/64 ZN	8
54	021180	LW 0.375	8
56	253861	BEARING, FLG 1-3/4 4-BLT W/O LC	2
57	252500	COLLAR, PROTECTIVE LOCK	2
58	250550	SPACER	2
59	R64473	SHIELD, SPIN	2
60	119641	SHIELD, SPIN	2
61	020430	WASHER, FLAT 5/8 STD.	6
62	124350	COTTER PIN, 1/8 X 1-1/2 ZN	4
63	005200	WASHER, FLAT 1/2 STD.	42
64	014770	BOLT, HHCS 1/2-13	12
65	023950	BOLT, HHCS 1/2-13 X 2.0 GR5 ZN	4
66	120970	SHSS 3/8-16 X 1/2 CUP POINT	8
67	010730	HEX BOLT 1/2-13 X 1.25 INCH GR5 ZN	16
68	254350	JACK STAND	1
69	038560	HEX BOLT 0.5000-13 X 4.0 X 4.0-N	1
70	255320	COTTERLESS PIN	1
71	244290	LOCK NUT, BULKHEAD 1/8 NPSM	6
72	013170	FITTING, GREASE	6
73	244250	ELBOW, 45 DEG. STREET	4
74	244260	FITTING, GREASE STRAIGHT	12
75	244280	CONNECTOR, BULKHEAD	6

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570650	BASIC UNIT - 180C LESS ROTORS AND DRIVE (CONT.)	Rf
76	I 493155R1	BRACKET	1
77	031080	HEX BOLT 1/2-13 X 1.00 INCH GR5 ZN	1
78	962500	TUBE, 1/4 NYLON	5 FT
79	167330	SOCKET, SMV EMBLEM MTG.	1
80	039950	KEY, SQUARE 3/8 X 1-3/4	4
81	R64765	BUSHING, 1-3/8 TYPE SF	2
82	234760	BUSHING, OD, 1-3/4 BORE	2
83	021530	KEY, SQUARE 3/8 X 2.0	4
84	570210	CARRIER ARM	3
86	574890	BOLT, IDLER PULLEY TENSIONER	2
87	574900	SKIRT, SAFETY	1
88	127890	HEX LOCK NUT O. 5000-13-D-N	16

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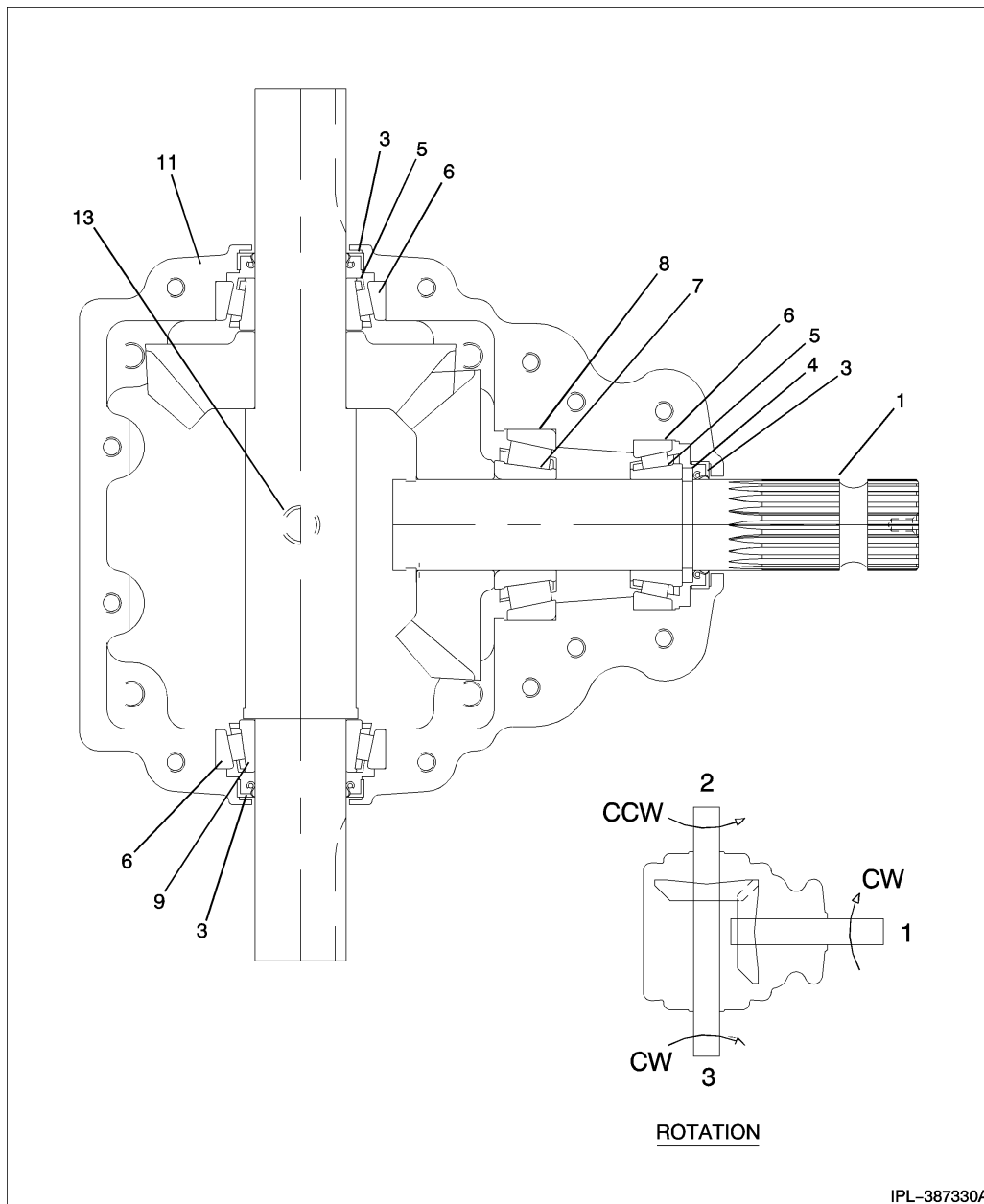
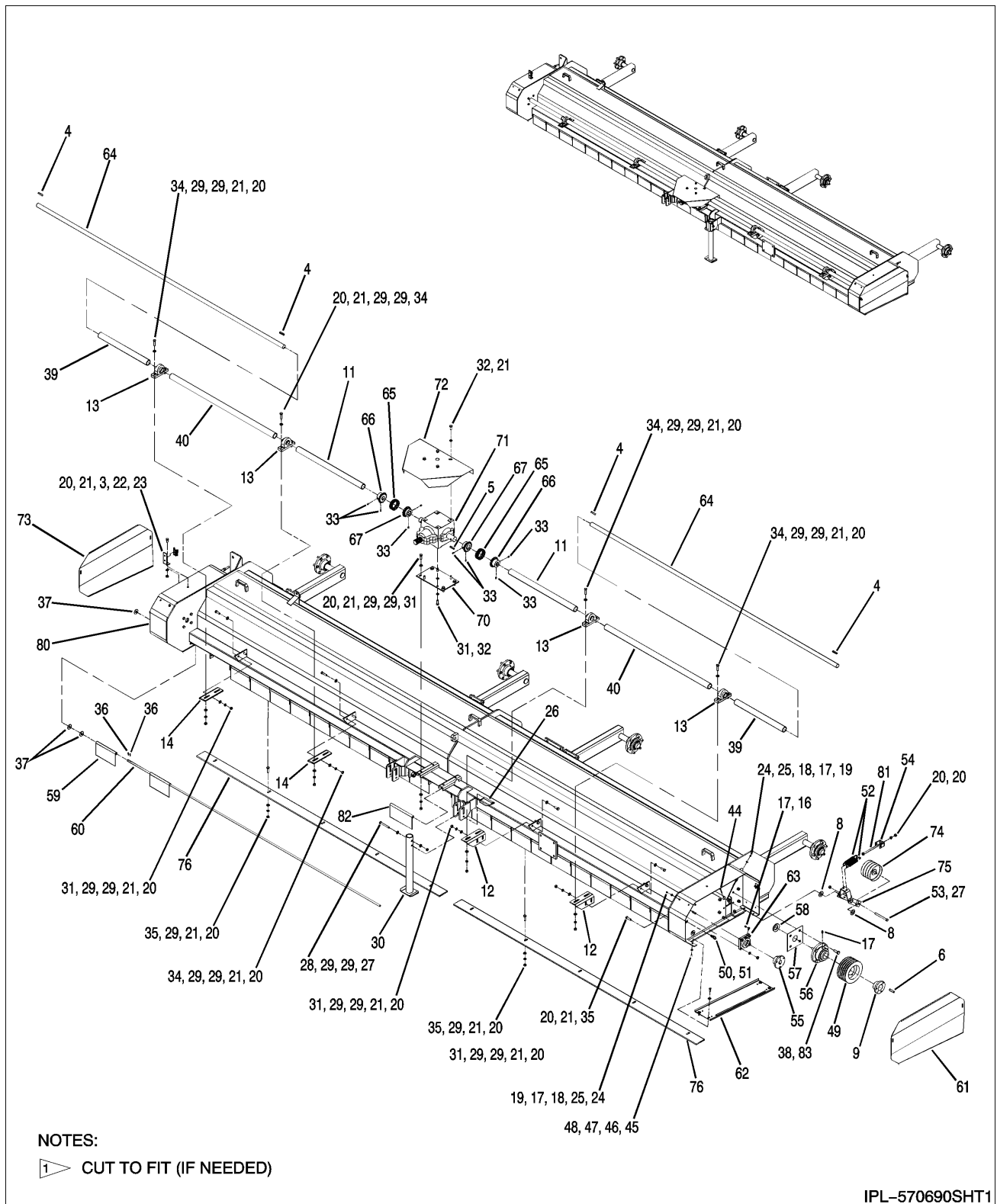
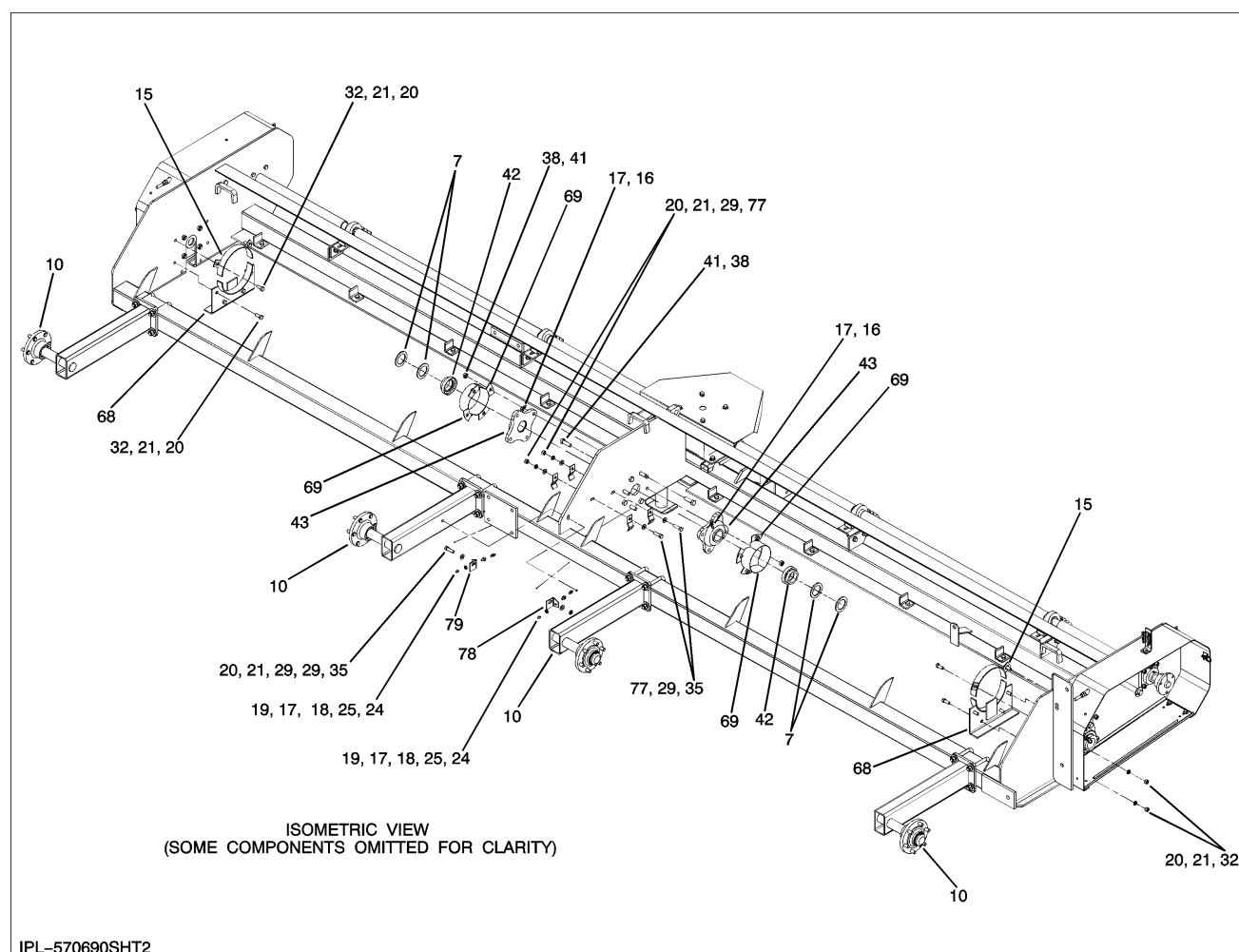
GEARBOX

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	387330	GEARBOX	RF
1	575320	SHAFT & GEAR STUB 22T	1
2	575330	SHAFT & GEAR CROSS 22T	1
3	247660	SEAL, 1.75 OD SHAFT	3
4	247670	RING, RETAINING	1
5	235770	CONE, TAPERED BRG. SM.	3
6	129770	CUP, TAPERED BRG. SM.	3
7	V241091	CONE, TAPERED BRG. LG.	1
8	E072317	CUP, TAPERED BRG. LG.	1
9	567790	CONE, BRG.	1
11	387920	CASTING, MOD. T HOLES	1
-12	387930	CASTING, MOD. THRU HOLES	1
13	257750	PLUG, 1/2 NPT	1
-14	247810	BUSHING, 1/8 NPT – 1/2 NPT	1
-15	247820	PLUG, PRESSURE RELIEF	1
-16	247830	BOLT, SHCS 3/8-16 X 2.25	12

BASIC UNIT – 240C LESS ROTORS AND DRIVE

BASIC UNIT – 240C LESS ROTORS AND DRIVE

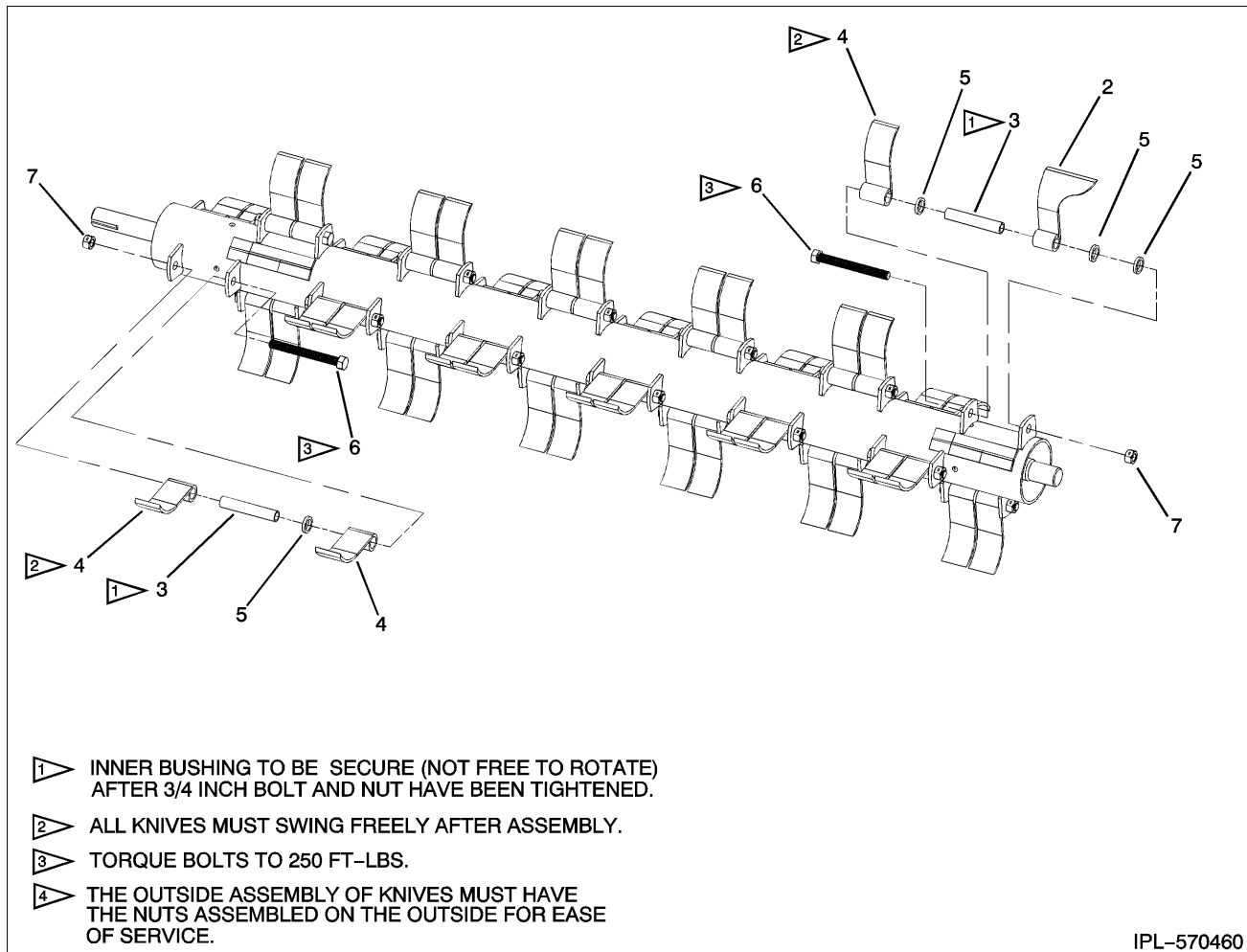
IPL-570690SHT2

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570690	BASIC UNIT – 240C LESS ROTORS AND DRIVE	RF
1	990510	NUT, LOCK 1-8 HEX	2
2	R66338	HEX BOLT 1.0000-8 X 3.0 X 3.0-N	2
3	167330	SOCKET, SMV EMBLEM MTG.	1
4	021530	KEY, SQUARE 3/8 X 2.0	4
5	039950	KEY, SQUARE 3/8 X 1-3/4	2
6	R66305	KEY, SQUARE 1/2 X 2.0	2
7	250590	SPACER, ROTOR	4
8	1107389	WASHER, FLAT 1-1/16 X 2.0 X 1/8	4
9	R66251	BUSHING, OD, TYPE SF	2
10	570210	CARRIER ARM	4
11	R64486	SHIELD, SPIN	2
12	R62891	MOUNTING, BRG. LH	2
13	R40741	BEARING, 1-3/8 PILLOW BLOCK	4
14	R60608	MOUNTING, BRG. RH	2
15	250480	ROTOR GUARD WLDT.	2
16	244250	ELBOW, 45 DEG. STREET	4
17	244260	FITTING, GEASE STRAIGHT	12
18	244280	CONNECTOR, BULKHEAD	6
19	962500	TUBE, 1/4 NYLON	5 FT
20	005360	NUT, HEX 1/2-13	58
21	005370	WASHER, LOCK 1/2 ZN	62
22	03180	HEX BOLT 1/2-13 X 1.00 INCH GR5 ZN	1
23	I 493166R1	BRACKET	1
24	013170	FITTING, GREASE	6
25	244290	LOCK NUT, BULKHEAD 1/8 NPSM	6
26	255320	COTTERLESS PIN	1
27	127890	HEX LOCK NUT 0.5000-13-D-N	3

BASIC UNIT – 240C LESS ROTORS AND DRIVE

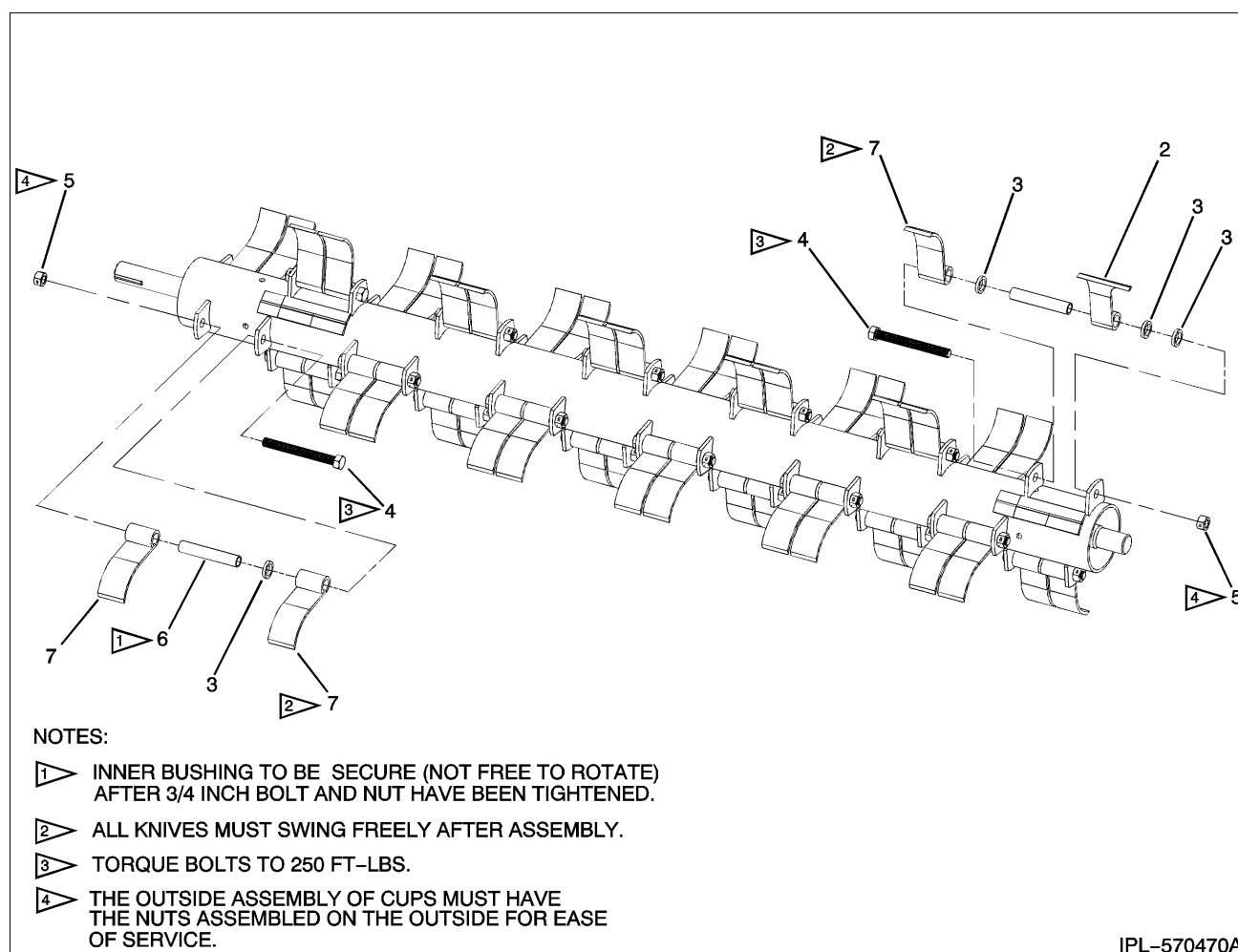
FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570690	BASIC UNIT – 240C LESS ROTORS AND DRIVE (CONT.)	RF
28	038560	HEX BOLT 0.5000-13 X 4.0 X 4.0-N	1
29	005200	WASHER, FLAT 1/2 STD.	58
30	254350	JACK STAND	1
31	014770	BOLT, HHCS 1/2-13	14
32	010730	HEX BOLT 1/2-13 X 1.25 INCH GR5 ZN	16
33	120970	SHSS 3/8-16 X 1/2 CUP POINT	8
34	023950	BOLT, HHCS 1/2-13 X 2.0 GR5 ZN	10
35	1770500	BOLT, 1/2-13 X 1-3/4 GR5 ZN	21
36	124350	COTTER PIN, 1/8 X 1-1/2 ZN	4
37	020430	WASHER, FLAT 5/8 STD.	6
38	1100840	NUT, ESNA 5/8-18	16
39	119641	SHIELD, SPIN	2
40	R64469	SHIELD, SPIN	2
41	213260	BOLT, HHCS 5/8-18 X 2-1/4 GR5 ZN	8
42	252510	COLLAR, PROTECTIVE LOCK	2
43	253871	BEARING, FLG. 2-3/16	2
44	124340	COTTER PIN, 3/16 X 2-1/2	2
45	027260	HEX NUT 0.3750-16 GR5 ZN	8
46	021180	LW 0.375	8
47	021190	WASHER, FLAT 3/8 STD. 7/16 X 1.0 X 5/64 ZN	8
48	012260	HEX BOLT 0.3750-16 X 1.0 X 1.0-N	8
49	R64761	5B 5B835SF X 5 GROOVE	2
50	156510	LATCH, MAIN	4
51	I120393	WASHER, FLAT 5/16	4
52	220860	SPRING – EXTENSION	4
53	162930	BOLT, HHCS 1/2-13 X 5-1/2 GR5 FULL THREAD	2
54	224400	CLIP, TAKE-UP	2
55	R64765	BUSHING, 1-3/8 TYPE SF	2
56	250630	BEARING, 2-3/16 SPHERICAL	2
57	250580	PLATE, SEAL	2
58	251130	SEAL, V-RING	2
59	243650	SKIRT, SAFETY	24
60	R45310	ROD, SKIRT 123.75 INCH	2
61	570330	SHIELD, LEFT	1
62	570350	BOTTOM CHANNEL	2
63	R40290	BEARING, FLG. 1-3/8	2
64	210680	JACKSHAFT	2
65	163770	CHAIN, ROLLER 60-2	2
66	210690	SPROCKET, TYPE B	2
67	367100	SPROCKET	2
68	250430	SPLICE PLATE WLDT.	2
69	254340	GUARD, 240 CTR.	4
70	574070	PLATE, MOUNTING	1
71	387330	GEARBOX, 1:1 600	1
72	367110	SHIELD	1
73	570320	SHIELD, RIGHT	1
74	210270	PULLEY ASSY, IDLER	2
75	210330	IDLER, WLDT.	2
76	R64368	BAR, SHREDDER	2
77	254330	CLIP, GEASE LINE	4
78	244230	CLIP, CENTER LUBE – LH	1
79	244240	CLIP, CENTER LUBE – RH	1
80	570850	FRAME WLDT., MAIN	1
81	574890	BOLT, IDLER PULLEY TENSIONER	2
82	574910	SKIRT, SAFETY 240	1
83	213260	BOLT, HHCS 5/8-18 X 2-1/4 GR5 ZN	8

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ROTOR ASSY, CUPPED RH – HS 180

IPL-570460

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570460	ROTOR ASSY, CUPPED RH – HS 180	RF
1	570410	ROTOR WLDT.	1
2	516330	KNIFE, 6 INCH OFFSET	1
3	570480	BUSHING, INNER	24
4	R40140	BLADE, 6 INCH LONG	47
5	R41660	SPACER, BLADE	26
6	479980	HEX BOLT 0.7500-10 X 7.0 GR8 ZN	24
7	152360	NUT, LOCK 3/4-10 HEX	24

ROTOR ASSY, CUPPED LH – HS 180

IPL-570470A

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570470	ROTOR ASSY, CUPPED LH – HS 180	RF
1	570410	ROTOR WLDT.	1
2	516320	KNIFE, 6 INCH OFFSET	1
3	R41660	SPACER, BLADE	26
4	479980	HEX BOLT 0.7500-10 X 7.0 GR8 ZN	25
5	152360	NUT, LOCK 3/4-10 HEX	24
6	570480	BUSHING, INNER	24
7	R40140	BLADE, 6 INCH LONG	47

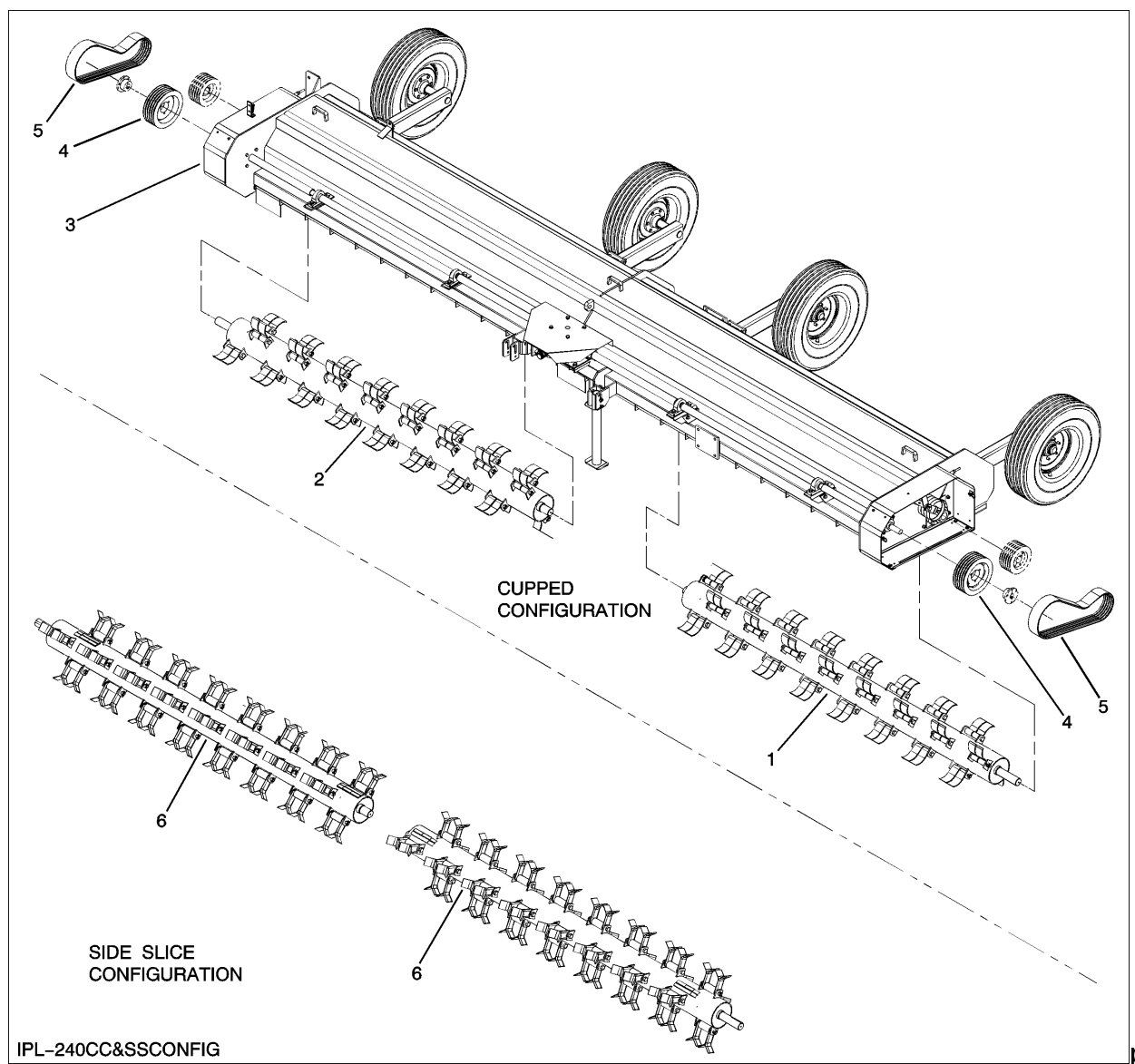
SHREDDER – 180C AND 240C BASIC UNIT

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570620 570630	SHREDDER – 240C, CUP SHREDDER – 240C, SD SLC	RF RF
1	570510	ROTOR ASSY., LH, CUPPED	1
2	570500	ROTOR ASSY., RH, CUPPED	1
3	570690	240C SHREDDER, BASIC UNIT	1
4	243580	SHEAVE	2
5	R65108	BELT	2
6	570520	ROTOR ASSY., 240C SD SCL	2

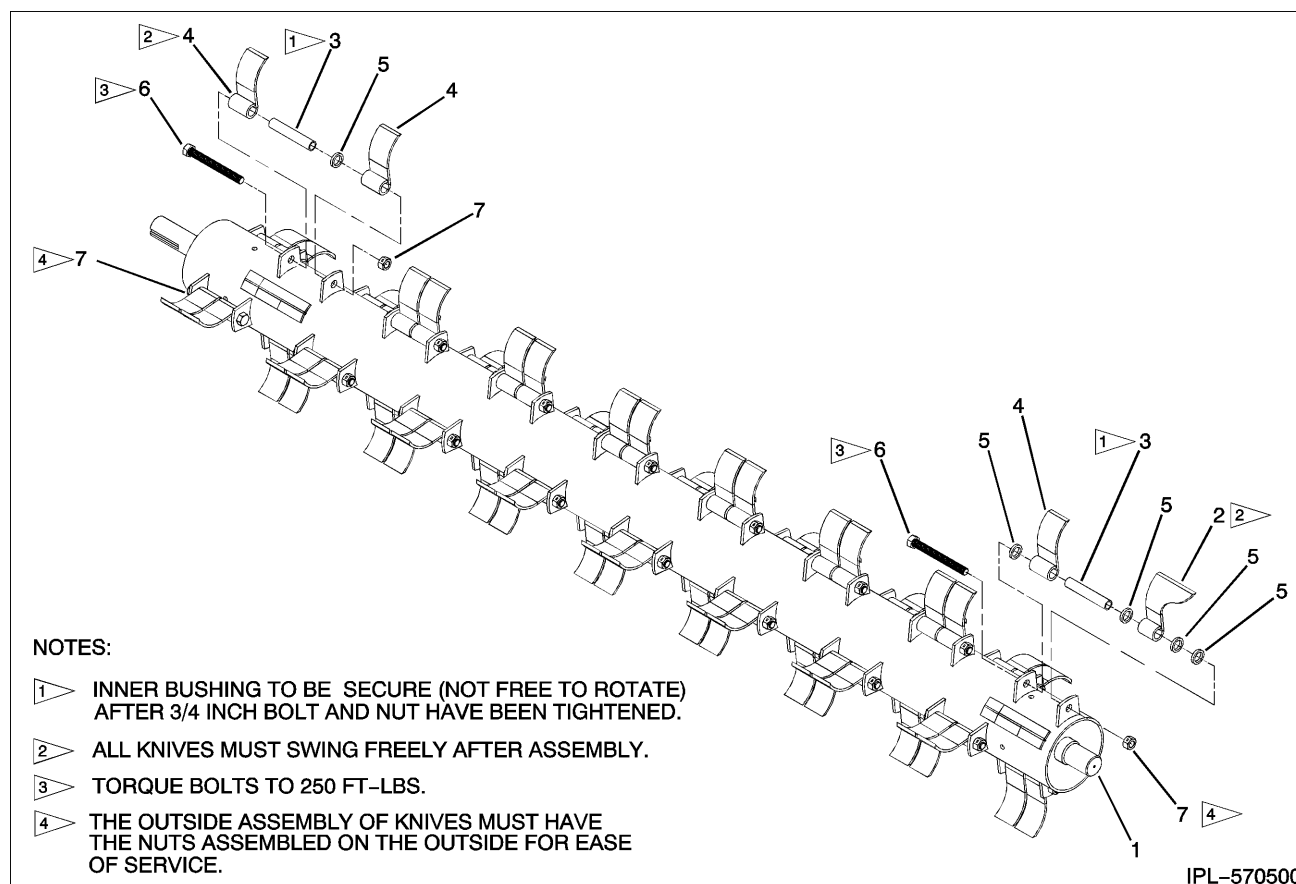
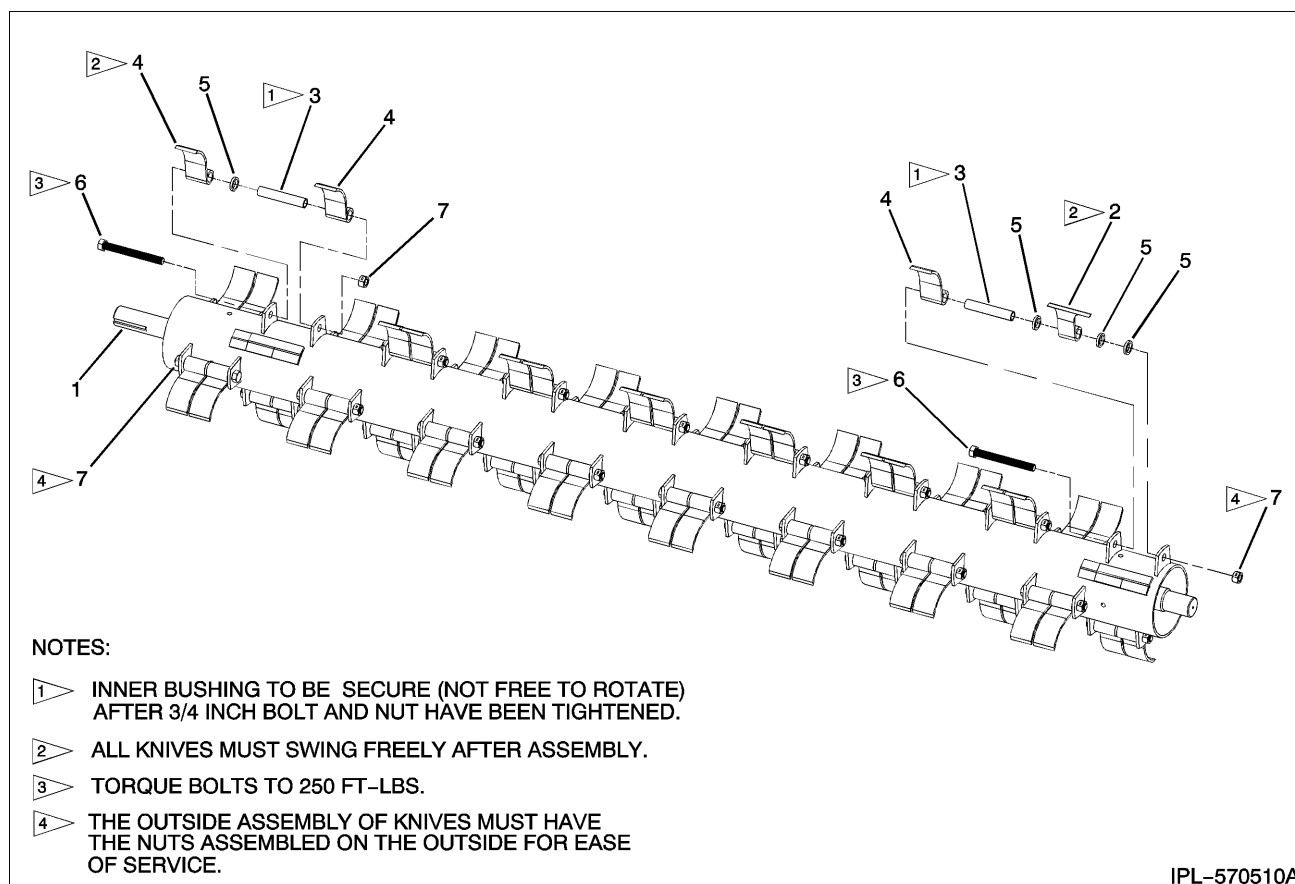
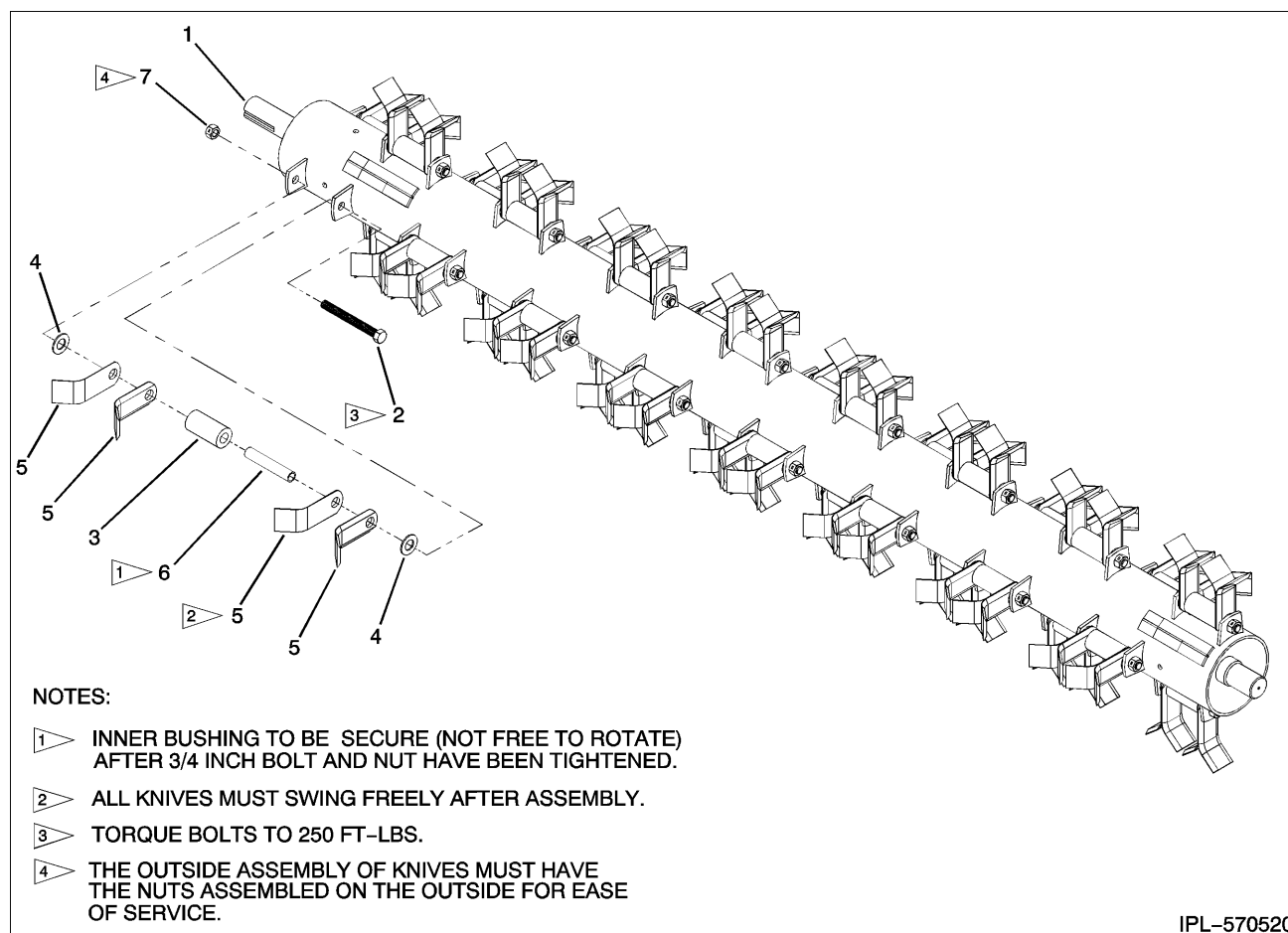
ROTOR ASSY, CUPPED RH – HS 240

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570500	ROTOR ASSY, CUPPED RH – HS 240	RF
1	570490	ROTOR WLDT.	1
2	R48350	KNIFE, 5 INCH OFFSET	1
3	570480	BUSHING, INNER	32
4	R45450	BLADE, 5 INCH LONG	63
5	R41660	SPACER, BLADE	34
6	479980	HEX BOLT 0.7500-10 X 7.0 GR8 ZN	32
7	152360	NUT, LOCK 3/4-10 HEX	32

ROTOR ASSY, CUPPED LH – HS 240

IPL-570510A

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570510	ROTOR ASSY, CUPPED LH – HS 240	RF
1	570490	ROTOR WLDT.	1
2	R48340	KNIFE, 5 INCH OFFSET	1
3	570480	BUSHING, INNER	32
4	R45450	BLADE, 5 INCH LONG	63
5	R41660	SPACER, BLADE	34
6	479980	HEX BOLT 0.7500-10 X 7.0 GR8 ZN	32
7	152360	NUT, LOCK 3/4-10 HEX	32

ROTOR ASSY – SD SLC, HS, 240

IPL-570520

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570520	ROTOR ASSY – SD SLC, HS, 240	RF
1	570490	ROTOR WLDT.	1
2	479980	HEX BOLT 0.7500-10 X 7.0 GR8 ZN	32
3	570440	BUSHING, OUTER	32
4	1107389	WASHER, FLAT 1-1/16 X 2.0 X 1/8	64
5	570730	SIDE-SLICE KNIFE	128
6	570480	BUSHING, INNER	32
7	152360	NUT, LOCK 3/4-10 HEX	32

Diagram illustrating the assembly components for the IPL-HITCH, numbered 1 through 7:

- 1: Main vertical support structure.
- 2: Long horizontal mounting bracket.
- 3: Small circular fastener or pin.
- 4: Curved metal bracket or handle.
- 5: Small pin or screw.
- 6: Small circular fastener or pin.
- 7: Small circular fastener or pin.

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
		HITCH ASSY	RF
1	254140	HITCH WLDT. , SHREDDER	1
2	R66338	HEX BOLT 1.0000-8 X 3.0 X 3.0-N	2
3	990510	NUT, LOCK 1-8 HEX	2
4	E150004	CARRIER, HOSE	1
5	006690	HEX BOLT 0.3750-16 X 1.25 X 1.25-N	2
6	021180	LOCK WASHER 0.375	2
7	027260	HEX NUT 0.3750-16 GR5 ZN	2
-8	1765302	KIT, SAFETY CHAIN (NOT ILLUSTRATED)	1

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
		DISK HITCH ASSY	RF
1	R42650	HITCH, DISK	1
2	201660	HHCS BOLT 5/8-11 X 6.0 INCH GR5 ZN	2
3	020440	WASHER, LOCK 5/8	2
4	I 124589	HEX NUT 0.6250-11-D-ZN	2

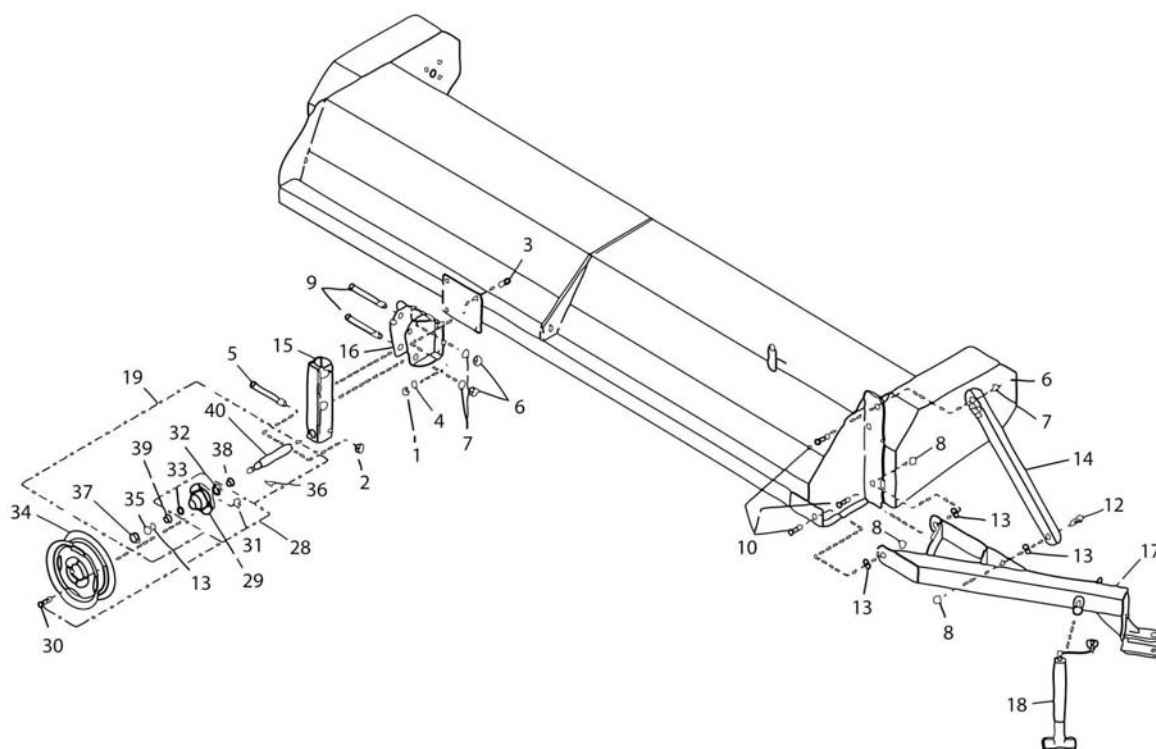
ROAD TRANSPORT

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	250170	ROAD TRANSPORT	RF
1	1124589	HEX NUT 5/8 INCH	-
2	19413967	HEX LOCK NUT 1/2 INCH	-
3	031430	BOLT, HHCS 5/8 X 2-1/4	-
4	020440	WASHER, LOCK 5/8	-
5	030420	BOLT, HHCS 1/2 X 4-1/2	2
6	036750	HEX NUT 3/4	-
7	036800	WASHER, LOCK 3/4	-
8	991040	HEX NUT 3/4 NYLON LOCK	-
9	147150	BOLT, HHCS 3/4 X 5-1/2	4
10	990540	BOLT, HHCS 3/4 X 2.00	-
11	990680	BOLT, HHCS 5/8 X 5-1/2	2
12	1769804	BOLT, HHCS 3/4 X 1-3/4	-
13	990710	WASHER, FLAT 0.81 X 2.0 X 0.149	-
14	248970	ANGLE, BRACE	1
15	249170	CHANNEL WLDT.	2
16	249230	AXLE ASSY WLDT.	2
17	249270	HITCH WLDT.	1
18	251300	JACK, SCREW TOP WIND	1
19	250960	SPINDLE ASSY	2
20	R60636	STAND, PARKING	2
28	016530	HUB ASSY	2
29	016531	HUB CASTING	2
30	018850	BOLT, STUD FOR HUB	6
31	018860	NUT, HEX 1.00 INCH WHEEL	6
32	020730	CUP, BEARING 2.56 INCH OD	1
33	020740	CUP, BEARING 2.33 INCH OD	1
34	018710	RIM	2
35	020710	NUT, SLOTTED 3/4	2
36	026630	COTTER PIN 5/32 X 1-1/2	2
37	035420	CAP, HUB 2-1/2	2
38	016520	CONE, BEARING 1-3/8 TAPERED ROLLER	2
39	012630	CONE, BEARING 1-1/4 TAPERED ROLLER	2
40	249290	SPINDLE, 1-7/8 DIA. X 13.0	2

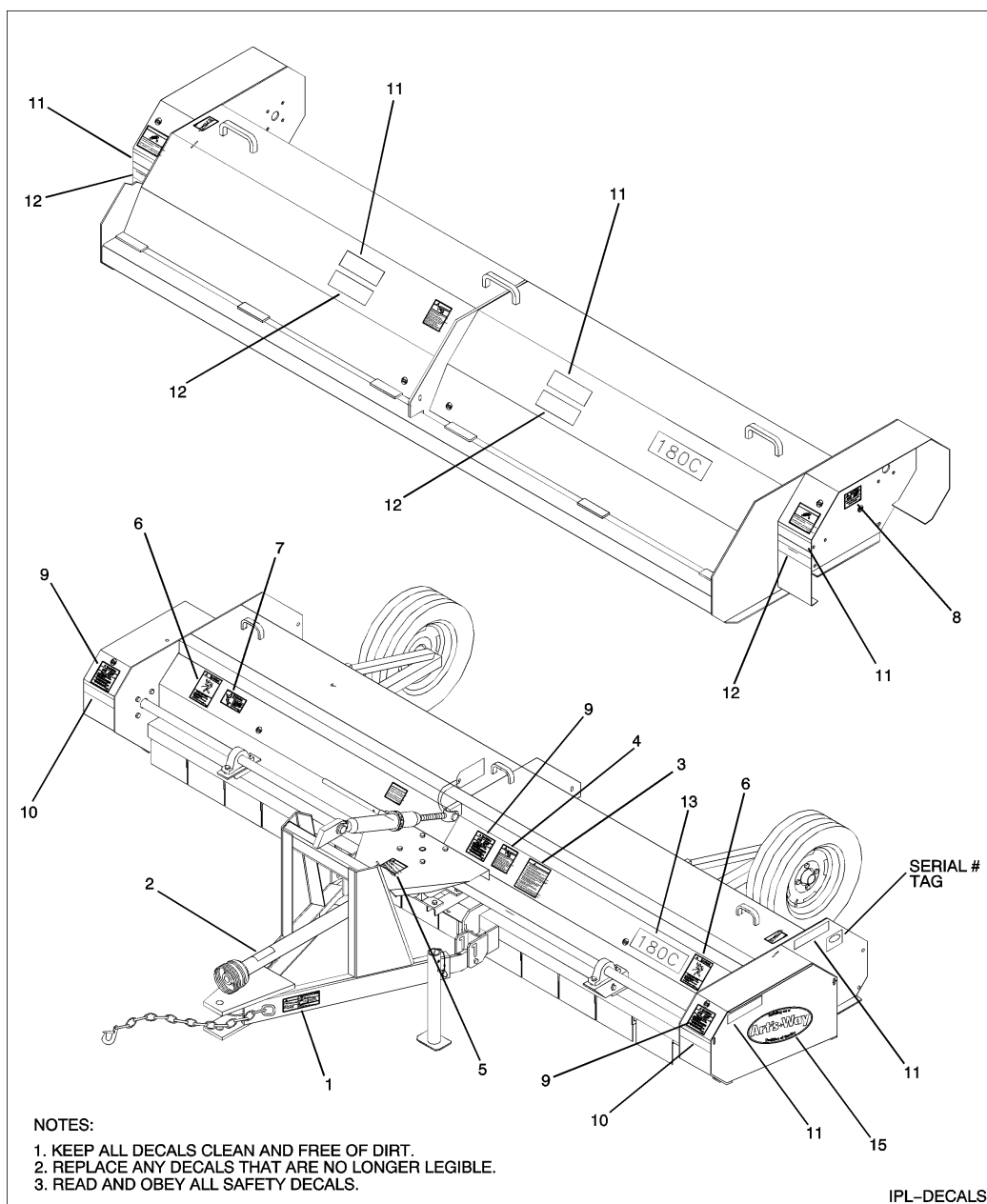
SAFETY DECALS

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY	
			180C	240C
		SAFETY DECALS	RF	RF
1	383970	DECAL, HITCH INSTRUCTIONS	1	1
2	268860	DECAL, DANGER ROTATING DRIVE	1	1
3	368040	DECAL, CAUTION SAFETY INSTRUCTIONS	1	1
4	363000	DECAL, DANGER, COMP., ROTATE, DIS-ENGAGE	2	2
5	384020	DECAL, DANGER 1050 RPM	1	1
6	467400	DECAL, WARNING FLYING OBJECT	2	2
7	467420	DECAL, WARNING RIDER FALL	1	1
8	467430	DECAL, DANGER SHIELD MISSING	2	2
9	467450	DECAL, WARNING MOVING PART	3	3
10	476460	TAPE, YELLOW REFLECTIVE	2	2
11	476450	TAPE, RED REFLECTIVE	2	4
12	476470	TAPE, RED-ORANGE REFLECTIVE	4	4
13	574000	DECAL, 180C MODEL	1	NA
-14	574010	DECAL, 240C MODEL	NA	1
15	519480	DECAL, ARTS-WAY LOGO	2	2

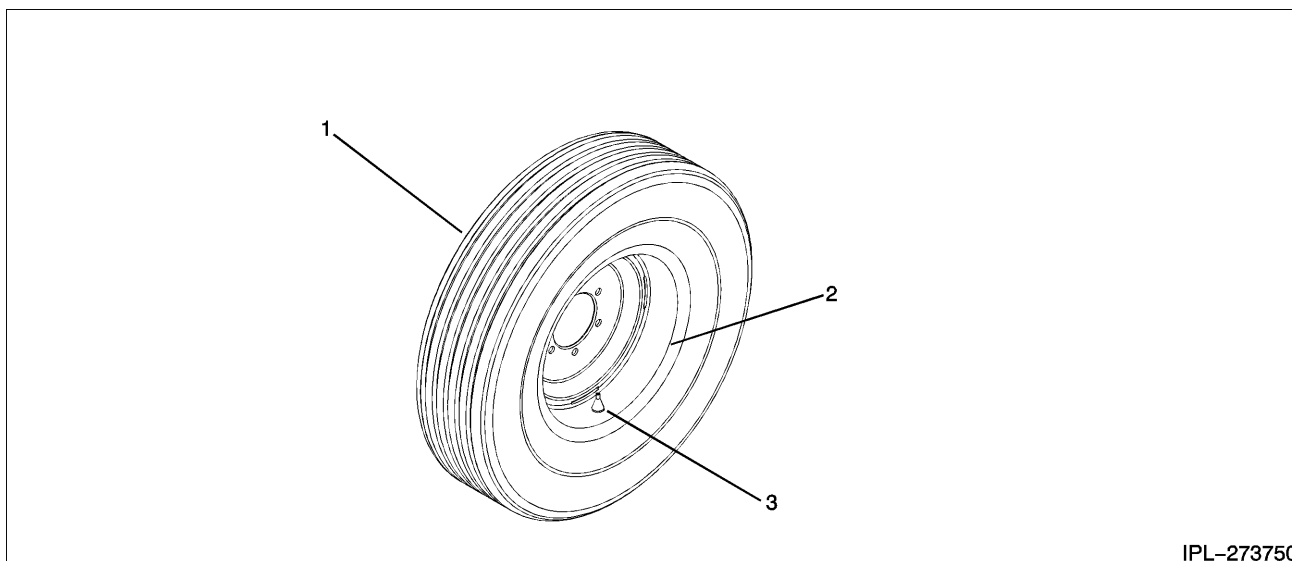
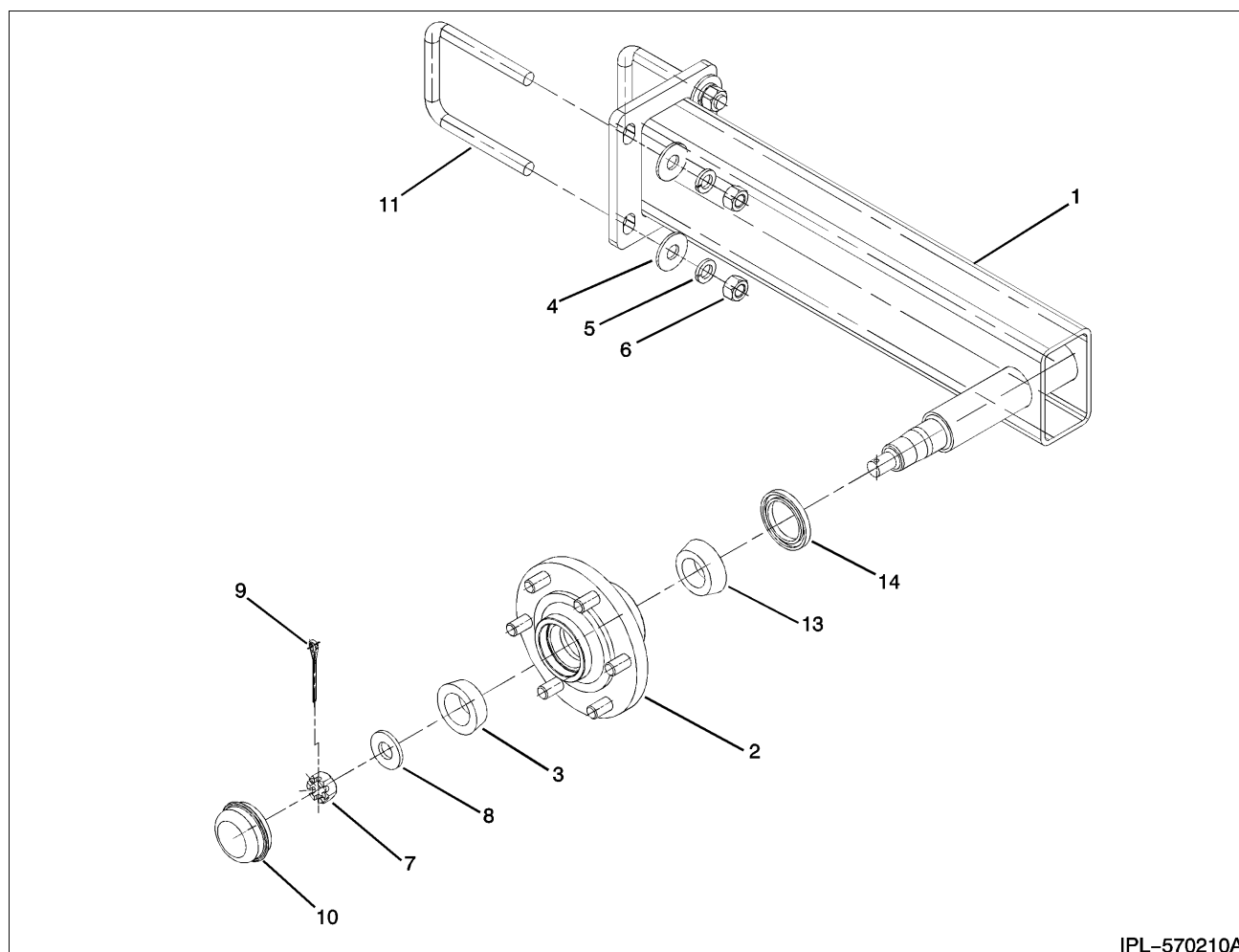
WHEEL ASSY – 7.60 / 15 IMP

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	273750	WHEEL ASSY – 7.60 / 15 IMP	RF
1	273730	TIRE, 6.70 / 15	1
2	273740	RIM, 15 / 6 6-BOLT	1
3	164420	VALVE STEM W/ CAP	1

CARRIER ARM ASSY

IPL-570210A

FIG ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSY
	570210	CARRIER ARM ASSY	RF
1	570060	ARM WLDT. , CARRIER	1
2	396100	HUB ASSY, 6-BOLT 6.00 B.C.	1
3	012630	BEARING CONE	1
4	020430	WASHER, FLAT 5/8 STD.	4
5	020440	WASHER, LOCK 5/8	4
6	020450	NUT, HEX 5/8-11	4
7	020710	HS NUT 0.750-16 GR5	1
8	020720	WASHER, FLAT	1
9	026630	COTTER PIN, 1/4 X 2.0	1
10	035420	HUBCAP, 2-1/2 INCH	1
11	442820	U-BOLT, 5/8 X 4.06 X 5.50	2
12	273750	WHEEL ASSY	1
13	044370	BRG, TPD ROL, CONE 1.375 ID	1
14	396050	SEAL, OIL 1.875 ID X 2.725 OD	1

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SPECIFICATIONS

	Shredder 180C	Shredder 240C
Tractor Requirements	75 HP Min	100 HP Min
Cutting Width	180 Inches	240 Inches
Lap 40 Inch Rows	N/A	20 Inches
Lap 30 Inch Rows	15 Inches	15 Inches
No. And Size Knives	6-1/2 Inch (96 Qty)	5 Inch (128 Qty)
Rotor Diameter	6 Inches	8 Inches
Rotor Bearing	1-3/4 Inch Flange	2-3/16 Inch Flange
Gearbox	200 HP	200 HP
Belts	5-B (2 Qty)	5-B (2 Qty)
Overall Dimensions	195 X 120 Inches	260 X 120 Inches
Shipping Weight (Approx.)	2,689 Lbs	4,000 Lbs
PTO RPM	1000	1000
Overriding Clutch Assembly		

Options

Hard Surface Knives (Standard On 240C)

Disk Hitch

Extra Wheel Assemblies

Road Transport



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